STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: ML-3282-A	6. SURFACE: Indian
1A. TYPE OF WORK: DRILL ☑ REENTER ☐ DEEPEN ☐	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE TRIBE
B. TYPE OF WELL: OIL ☐ GAS ☑ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☑	8. UNIT or CA AGREEMENT NAME: UNIT #891008900A
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE L.P.	9. WELL NAME and NUMBER: NBU 921-16P
3. ADDRESS OF OPERATOR: 1368 S 1200 E CITY VERNAL STATE UT ZIP 84078 PHONE NUMBER: (435) 781-7024	10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 537'FSL, 610'FEL 623827X 4431918Y 40.030295 -109.548773 AT PROPOSED PRODUCING ZONE:	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 16 9S 21E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 11.55 +/- MILES FROM OURAY, UTAH	12. COUNTY: UINTAH 13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 537'	16. NUMBER OF ACRES IN LEASE: 40.00
17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40.00	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): REFER TO TOPO C	19. PROPOSED DEPTH: 10,130
20. BOND DESCRIPTION: RLB0005239	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 4817'GL	22. APPROXIMATE DATE WORK WILL START:
23. ESTIMATED DURATION:	

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4"	9 5/8 32.3# H-40	2,500	315 SX CLASS G 1.18 YIELD 15.6 PPG
7 7/8"	4 1/2 11.6# I-80	10,130	2060 SX 50/50 POZ 1.31 YIELD 14.3 PPG

OLD LOCATION Rm 4/21/07

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- ☑ COMPLETE DRILLING PLAN
- ☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) SHEILA UPCHEGO TITLE SENIOR LAND ADMIN SPECIALIST

SIGNATURE Sheila Upchego DATE 4/18/2007

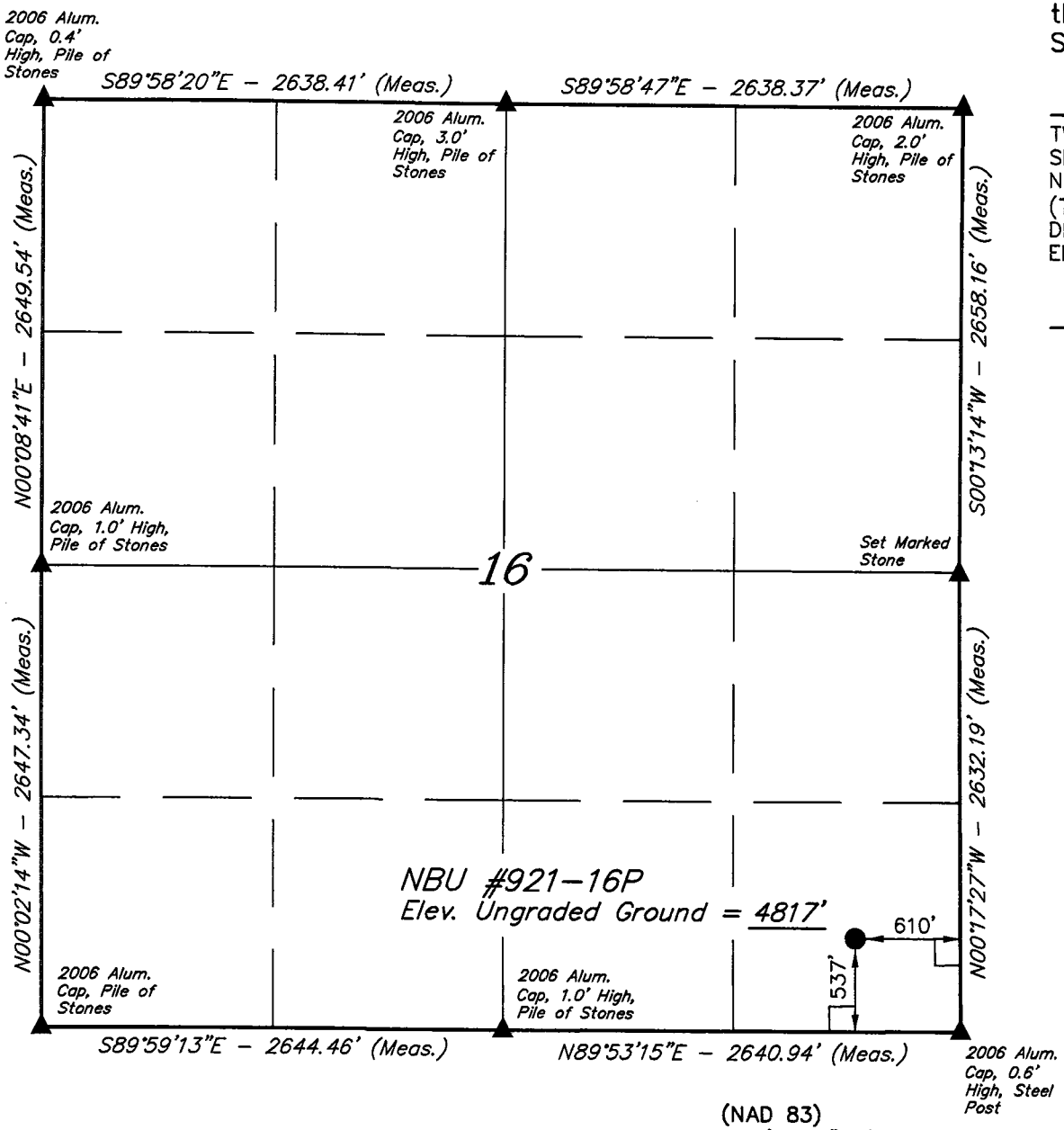
(This space for State use only)

API NUMBER ASSIGNED: 43-047-39254 APPROVAL:

RECEIVED
APR 23 2007
DIV. OF OIL, GAS & MINING

(11/2001) (See Instructions on Reverse Side)

T9S, R21E, S.L.B.&M.



(NAD 83)
LATITUDE = 40°01'49.17" (40.030325)
LONGITUDE = 109°32'58.18" (109.549494)

(NAD 27)
LATITUDE = 40°01'49.30" (40.030361)
LONGITUDE = 109°32'55.70" (109.548806)

LEGEND:

└ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

Kerr-McGee Oil & Gas Onshore LP

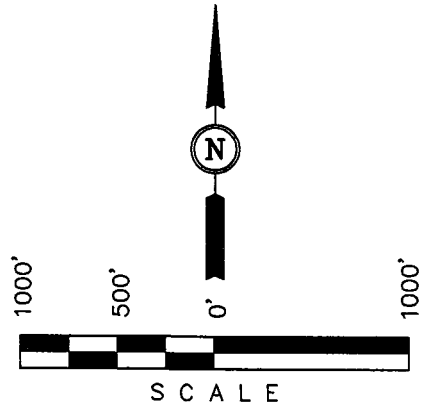
Well location, NBU #921-16P, located as shown in the SE 1/4 SE 1/4 of Section 16, T9S, R21E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE: 1" = 1000'	DATE SURVEYED: 01-24-07	DATE DRAWN: 01-31-07
PARTY: L.K. J.M. S.L.	REFERENCES: G.L.O. PLAT	
WEATHER: WARM	FILE: Kerr-McGee Oil & Gas Onshore LP	

Form 3160-3
(August 1999)

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
ML-3282-A

6. If Indian, Allottee or Tribe Name
TRIBAL SURFACE

1a. Type of Work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.
UNIT #891008900A

b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

8. Lease Name and Well No.
NBU 921-16P

2. Name of Operator
KERR MCGEE OIL AND GAS ONSHORE LP

9. API Well No.
43047-39254

3A. Address
1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-7024

10. Field and Pool, or Exploratory
NATURAL BUTTES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **SE/SE 962'FSL, 491'FEL** 623861X 40.031457
At proposed prod. Zone 4432048Y -109.548352

11. Sec., T., R., M., or Blk, and Survey or Area
SEC. 16, T9S, R21E

14. Distance in miles and direction from nearest town or post office*
11.55 +/- MILES FROM OURAY, UTAH

12. County or Parish
UINTAH

13. State
UTAH

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **537'**

16. No. of Acres in lease
40.00

17. Spacing Unit dedicated to this well
40.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **REFER TO TOPO C**

19. Proposed Depth
10,130'

20. BLM/BIA Bond No. on file
RLB0005239

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4877'GL

22. Approximate date work will start*
UPON APPROVAL

23. Estimated duration
TO BE DETERMINED

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office.
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature — Name *(Printed/Typed)*: **SHEILA UPCHEGO** — Date: **6/21/2007**

Title: **SENIOR LAND ADMIN SPECIALIST**

Approved by *(Signature)* — Name *(Printed/Typed)*: **BRADLEY G. HILL** — Date: 07-07-08

Title — Office: **ENVIRONMENTAL MANAGER**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

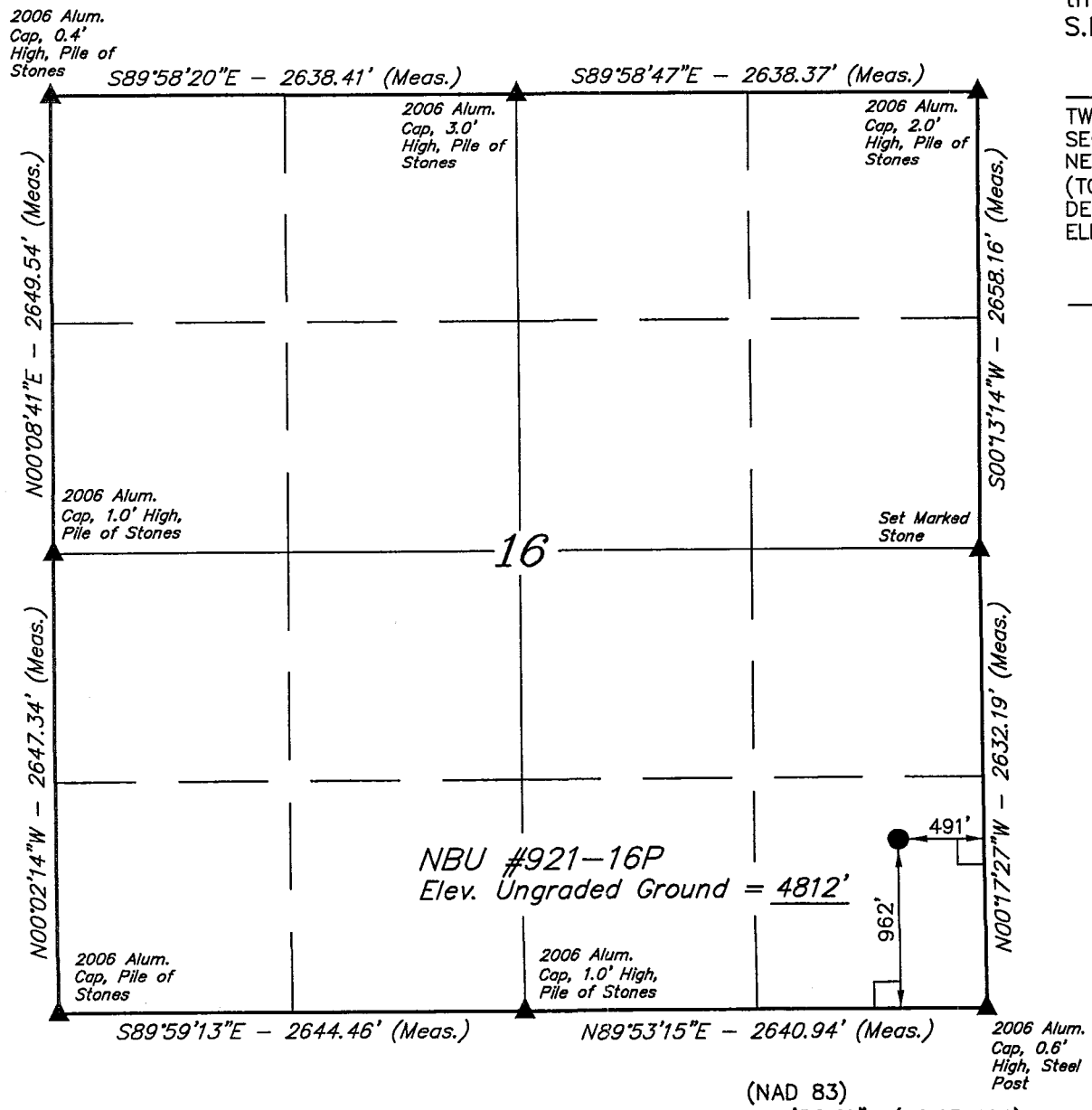
Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

Federal Approval of this Action is Necessary

RECEIVED
JUN 21 2007
DIV OF OIL, GAS & MINING

T9S, R21E, S.L.B.&M.



(NAD 83)
LATITUDE = 40°01'53.38" (40.031494)
LONGITUDE = 109°32'56.67" (109.549075)

(NAD 27)
LATITUDE = 40°01'53.51" (40.031531)
LONGITUDE = 109°32'54.19" (109.548386)

LEGEND:

└ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

Kerr-McGee Oil & Gas Onshore LP

Well location, NBU #921-16P, located as shown in the SE 1/4 SE 1/4 of Section 16, T9S, R21E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

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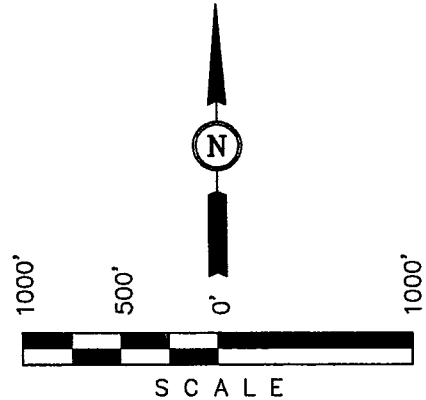

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REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REVISED: 04-30-07 C.H.

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	01-24-07	01-31-07
PARTY: L.K. J.M. S.L.	REFERENCES: G.L.O. PLAT	
WEATHER: WARM	FILE: Kerr-McGee Oil & Gas Onshore LP	

NBU 921-16P
SE/SE Sec. 16, T9S, R21E
UINTAH COUNTY, UTAH
ML-3282-A

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. **Estimated Tops of Important Geologic Markers:**

Formation	Depth
Uinta	0- Surface
Green River	1633'
Top of Birds Nest Water	1959'
Mahogany	2321'
Wasatch	5008'
Mesaverde	7990'
MVU2	8917'
MVL1	9502'
TD	10,130'

2. **Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

Substance	Formation	Depth
	Green River	1663'
	Top of Birds Nest Water	1959'
	Mahogany	2321'
Gas	Wasatch	5008'
Gas	Mesaverde	7990'
Gas	MVU2	8917'
Gas	MVL1	9502'
Water	N/A	
Other Minerals	N/A	

3. **Pressure Control Equipment** (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. **Proposed Casing & Cementing Program:**

Please see the Natural Buttes Unit SOP.

5. **Drilling Fluids Program:**

Please see the Natural Buttes Unit SOP.

6. **Evaluation Program:**

Please see the Natural Buttes Unit SOP.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,130' TD, approximately equals 6281 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4052 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please see Natural Buttes Unit SOP.

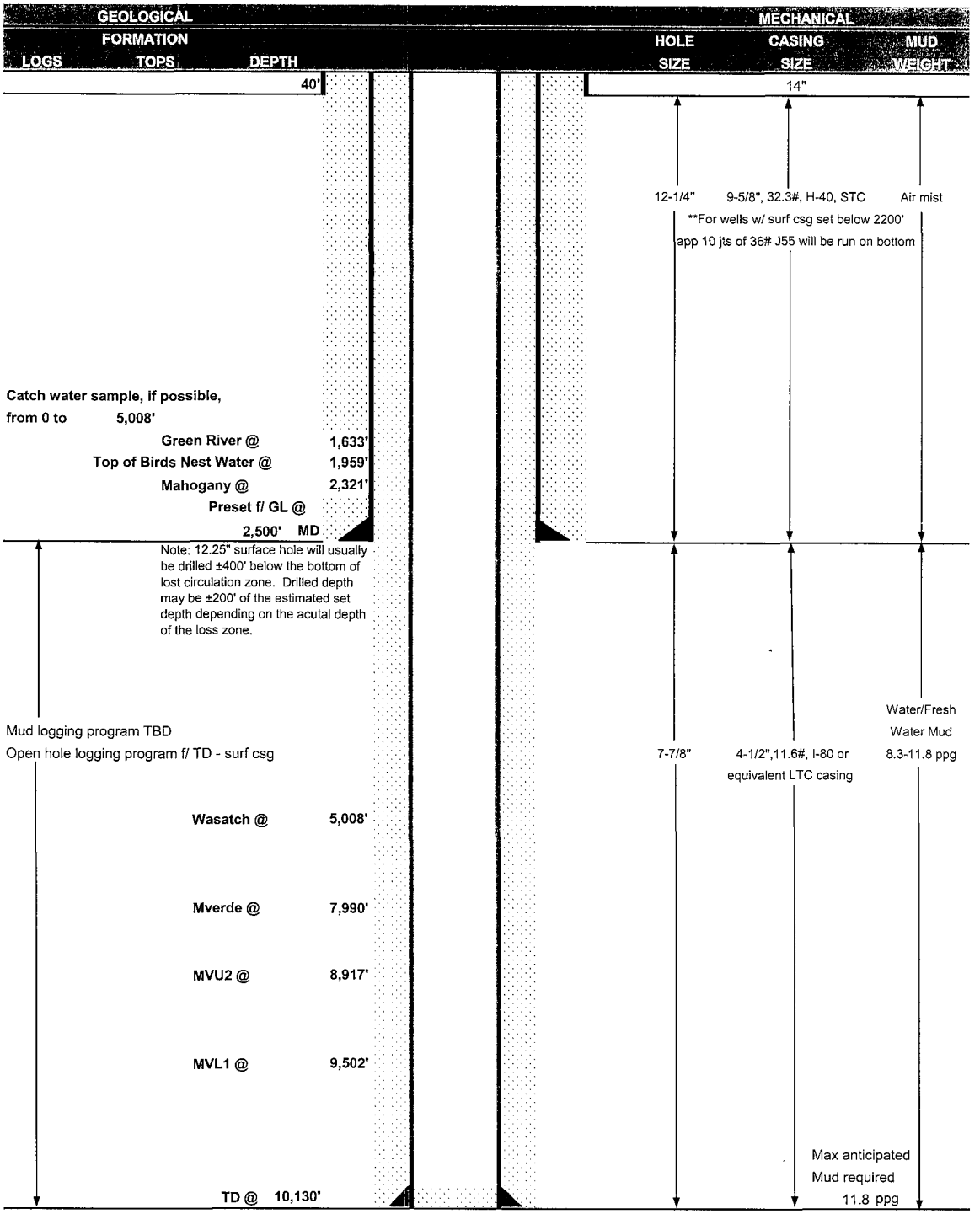
10. **Other Information:**

Please see Natural Buttes Unit SOP.

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	April 18, 2007		
WELL NAME	**NBU 921-16P**			TD	10,130' MD/TVD		
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	ELEVATION	4,814' GL KB 4,829'
SURFACE LOCATION	SE/SE SEC. 16, T9S, R21E 537'FSL, 610'FEL					BHL	Straight Hole
	Latitude: 40.030325	Longitude:	109.549494				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: TRIBAL (SURF & MINERALS), BLM, UDOGM, Tri-County Health Dept.						



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								2270	1370	254000
SURFACE	9-5/8"	0	to	2100	32.30	H-40	STC	0.57********	1.39	3.59
								3520	2020	564000
	9-5/8"	2100	to	2500	36.00	J-55	STC	1.11********	1.73	7.98
								7780	6350	201000
PRODUCTION	4-1/2"	0	to	10130	11.60	I-80	LTC	1.95	1.02	1.96

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.8 ppg) .22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3987 psi

********* Burst SF is low but csg is stronger than formation at 2500 feet

********* EMW @ 2500 for 2270# is 17.5 ppg or 0.9 psi/ft

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
Option 1							
	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	230	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,500'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	490	60%	11.00	3.38
	TAIL	5,630'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1570	60%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

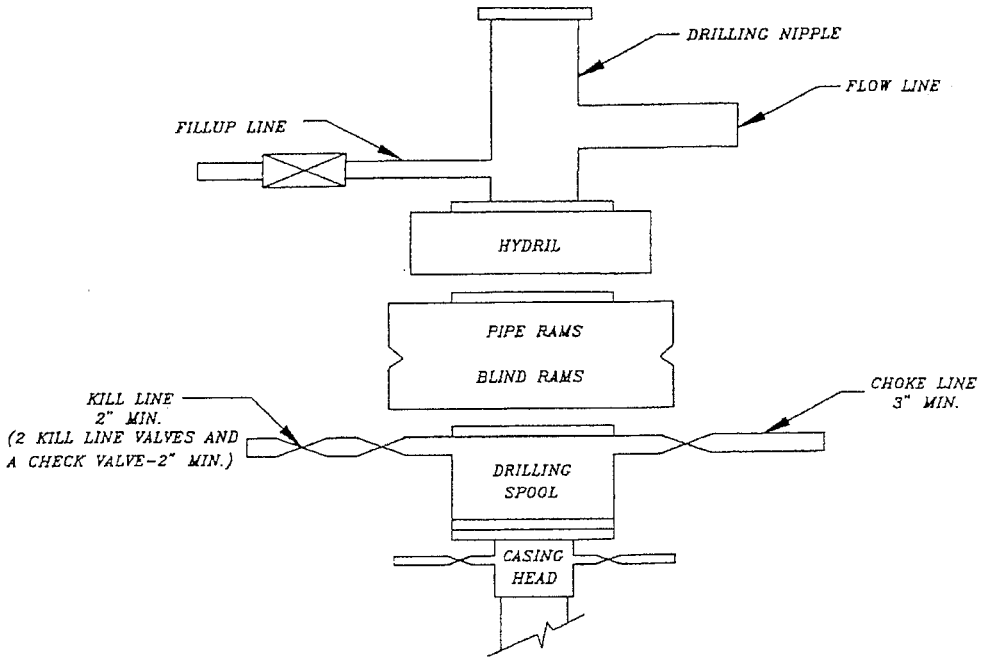
DRILLING ENGINEER: _____ **DATE:** _____

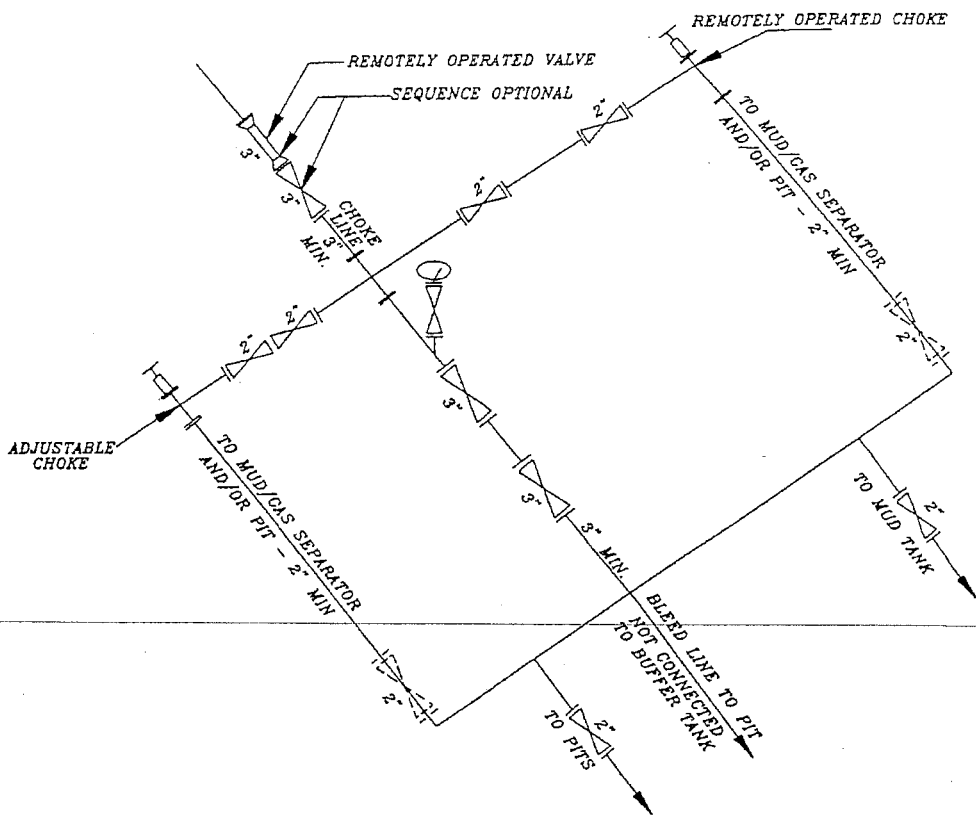
Brad Laney

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Randy Bayne

5M BOP STACK and CHOKE MANIFOLD SYSTEM





NBU 921-16P
SE/SE SEC. 16, T9S, R21E
UINTAH COUNTY, UTAH
ML-3282-A

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. **Planned Access Roads:**

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

Approximately 0.15 +/- miles of new access road. Please refer to the attached Topo Map B.

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing & Proposed Facilities:**

Please see the Natural Buttes Unit SOP.

Approximately 2739' +/- of 4" pipeline is proposed from the location to an existing pipeline.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon Brown (2.5Y 6/2), a non-reflective earthtone.

5. **Location and Type of Water Supply:**

Please see the Natural Buttes SOP.

6. **Source of Construction Materials:**

Please see the Natural Buttes SOP.

7. **Methods of Handling Waste Materials:**

Please see the Natural Buttes SOP.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E *(Request is in lieu of filing Form 3160-5, after initial production).*

8. **Ancillary Facilities:**

Please see the Natural Buttes SOP.

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Culverts will be installed where needed.

A run off diversion for drainage will be constructed where needed.

The reserve pit will be lined. When the reserve pit is closed the pit liner will be buried below plow depth.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

10. **Plans for Reclamation of the Surface:**

Please see the Natural Buttes SOP.

11. **Surface Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026
(435) 722-5141

12. **Other Information:**

A Class III Archaeological Survey Report has been conducted for this location and submitted to the Ute Indian Tribe prior to the on-site inspection.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within boundaries of the unit.

13. **Lessee's or Operator's Representative & Certification:**

Sheila Ucphego
Senior Land Admin Specialist
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7024

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Indian Affairs Nationwide Bond #RLB0005239, Bureau of Land Management Nationwide Bold #WYB000291 and State of Utah Bond #RLB0005237.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Sheila Upchego

4/18/2007
Date

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	June 21, 2007	
WELL NAME	**NBU 921-16P**		TD	10,130' MD/TVD	
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah	ELEVATION 4,814' GL	KB 4,829'
SURFACE LOCATION	SE/SE SEC. 16, T9S, R21E 962'FSL, 491'FEL			BHL	Straight Hole
	Latitude: 40.030325	Longitude: 109.549494			
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: TRIBAL (SURF & MINERALS), BLM, UDOGM, Tri-County Health Dept.				

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'	14"		
			12-1/4"	9-5/8", 32.3#, H-40, STC **For wells w/ surf csg set below 2200' app 10 jts of 36# J55 will be run on bottom	Air mist
Catch water sample, if possible, from 0 to 5,008'	Green River @	1,633'			
	Top of Birds Nest Water @	1,959'			
	Mahogany @	2,321'			
	Preset f/ GL @	2,500' MD			
	Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
Mud logging program TBD Open hole logging program f/ TD - surf csg			7-7/8"	4-1/2",11.6#, I-80 or equivalent LTC casing	Water/Fresh Water Mud 8.3-11.8 ppg
	Wasatch @	5,008'			
	Mverde @	7,990'			
	MVU2 @	8,917'			
	MVL1 @	9,502'			
	TD @	10,130'			Max anticipated Mud required 11.8 ppg

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS: BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						2270	1370	254000
SURFACE	9-5/8"	0	to	2100	32.30	H-40	STC	0.57********	1.39	3.59
								3520	2020	564000
	9-5/8"	2100	to	2500	36.00	J-55	STC	1.11********	1.73	7.98
								7780	6350	201000
PRODUCTION	4-1/2"	0	to	10130	11.60	I-80	LTC	1.95	1.02	1.96

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.8 ppg) .22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3987 psi

******** Burst SF is low but csg is stronger than formation at 2500 feet

******** EMW @ 2500 for 2270# is 17.5 ppg or 0.9 psi/ft

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
Option 1	TOP OUT CMT (1)	250	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	100		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	2000	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	230	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,500'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	490	60%	11.00	3.38
	TAIL	5,630'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1570	60%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____

Brad Laney

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Randy Bayne

NBU 921-16P
SE/SE SEC. 16, T9S, R21E
UINTAH COUNTY, UTAH
ML-3282-A

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. **Planned Access Roads:**

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

Approximately 70' +/- of new access road. Please refer to the attached Topo Map B.

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing & Proposed Facilities:**

Please see the Natural Buttes Unit SOP.

Approximately 2830' +/- of 4" pipeline is proposed from the location to an existing pipeline.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon Brown (2.5Y 6/2), a non-reflective earthtone.

5. **Location and Type of Water Supply:**

Please see the Natural Buttes SOP.

6. **Source of Construction Materials:**

Please see the Natural Buttes SOP.

7. **Methods of Handling Waste Materials:**

Please see the Natural Buttes SOP.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E *(Request is in lieu of filing Form 3160-5, after initial production).*

8. **Ancillary Facilities:**

Please see the Natural Buttes SOP.

9. **Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Culverts will be installed where needed.

A run off diversion for drainage will be constructed where needed.

The reserve pit will be lined. When the reserve pit is closed the pit liner will be buried below plow depth.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be re-surveyed and a form 3160-5 will be submitted.

10. **Plans for Reclamation of the Surface:**

Please see the Natural Buttes SOP.

11. **Surface Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe
P.O. Box 70
Fort Duchesne, Utah 84026
(435) 722-5141

12. **Other Information:**

A Class III Archaeological Survey Report has been conducted for this location and submitted to the Ute Indian Tribe prior to the on-site inspection.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within boundaries of the unit.

13. **Lessee's or Operator's Representative & Certification:**

Sheila Ucphego
Senior Land Admin Specialist
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7024

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Indian Affairs Nationwide Bond #RLB0005239, Bureau of Land Management Nationwide Bold #WYB000291 and State of Utah Bond #RLB0005237.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Sheila Upchego

6/21/2007
Date

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; TURN LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 1.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION APPROXIMATELY 3.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN EASTERY DIRECTION APPROXIMATELY 1.8 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 2.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 1.2 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE SOUTHWEST; FOLLOW ROAD FLAGS IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 70' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 42.5 MILES.

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P

LOCATED IN UINTAH COUNTY, UTAH
SECTION 16, T9S, R21E, S.L.B.&M.

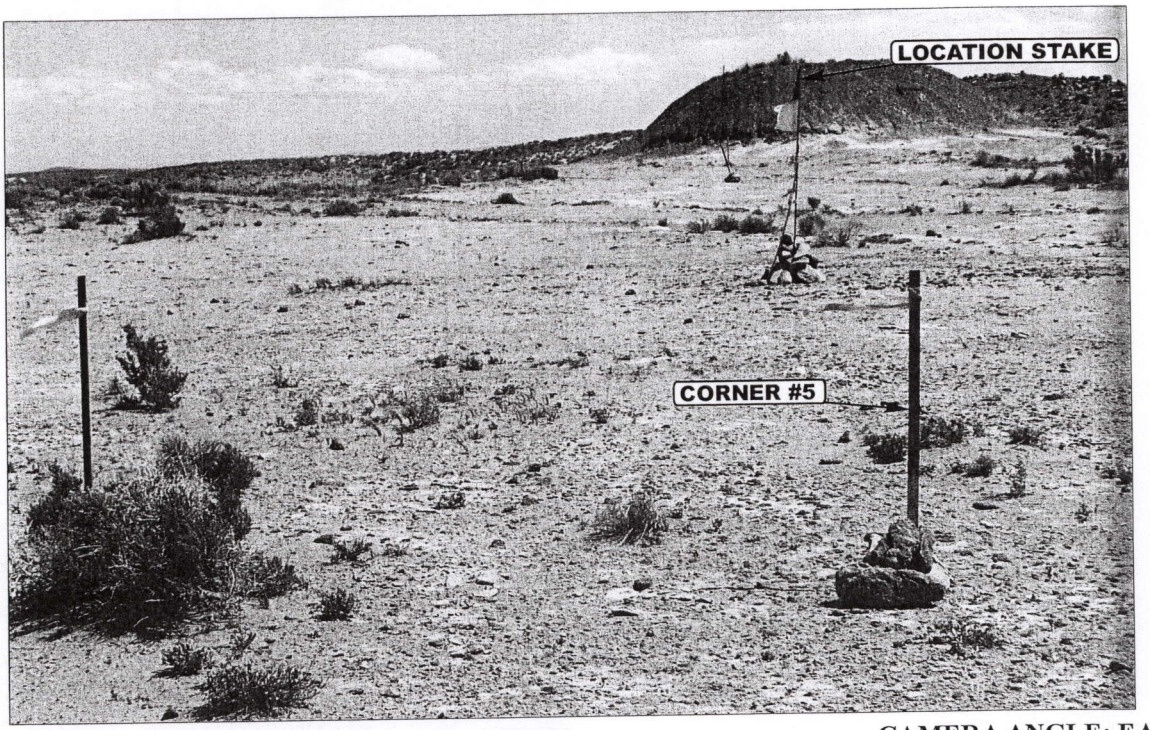


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: EASTERLY**

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS **CAMERA ANGLE: WESTERLY**

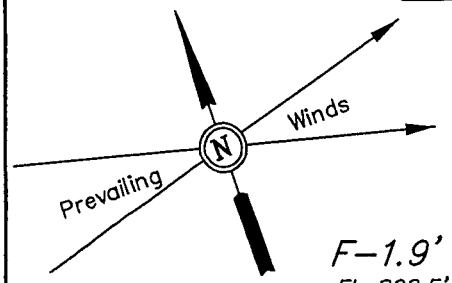
- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	01 MONTH	30 DAY	07 YEAR	PHOTO
TAKEN BY: D.K.	DRAWN BY: C.P.	REVISED: 04-24-07		

Kerr-McGee Oil & Gas Onshore LP

LOCATION LAYOUT FOR

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.
962' FSL 491' FEL



Existing Road

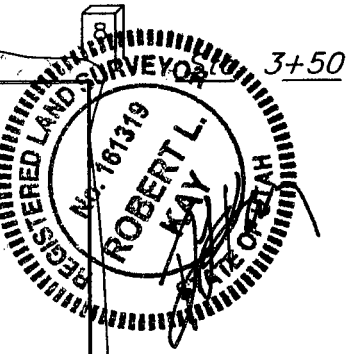
Proposed Access Road

Approx. Toe of Fill Slope

F-1.9'
El. 808.5'

F-2.6'
El. 807.8'

SCALE: 1" = 50'
DATE: 04-30-07
Drawn By: C.H.



NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.

Reserve Pit Backfill & Spoils Stockpile

FLARE PIT

Pit Topsoil

Topsoil Stockpile

Sta. 3+50

58'

180'

F-2.1'
El. 808.3'

PIPE TUBS

CATWALK

PIPE RACKS

C-1.9'
El. 812.3'

El. 812.0'
C-11.6'
(btm. pit)

C-1.4'
El. 811.8'

Blooie Line

RIG

10'

58'

135'

Sta. 1+70

Topsoil Stockpile

C-4.3'
El. 814.7'

70'

RESERVE PITS
(10' Deep)

Total Pit Capacity
W/2' of Freeboard
= 9,850 Bbls. ±
Total Pit Volume
= 2,780 Cu. Yds.

MUD TANKS

DOG HOUSE

C-1.2'
El. 811.6'

TOILET

TRAILER

LIGHT PLANT

BOILER

MUD TANKS

PUMP HOUSE

WATER TANK

15' WIDE BENCH/DIKE

SLOPE 1 1/2 : 1

150'

Approx. Top of Cut Slope

TRASH

170'

F-2.0'
El. 808.4'

PROPANE STORAGE

Sta. 0+50

15' WIDE BENCH

30'

El. 808.2'
C-7.8'
(btm. pit)

F-3.1'
El. 807.3'

Sta. 0+00

F-4.0'
El. 806.4'

F-2.8'
El. 807.6'

NOTES:

Elev. Ungraded Ground At Loc. Stake = 4812.3'

FINISHED GRADE ELEV. AT LOC. STAKE = 4810.4'

FIGURE #1

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

Kerr-McGee Oil & Gas Onshore LP

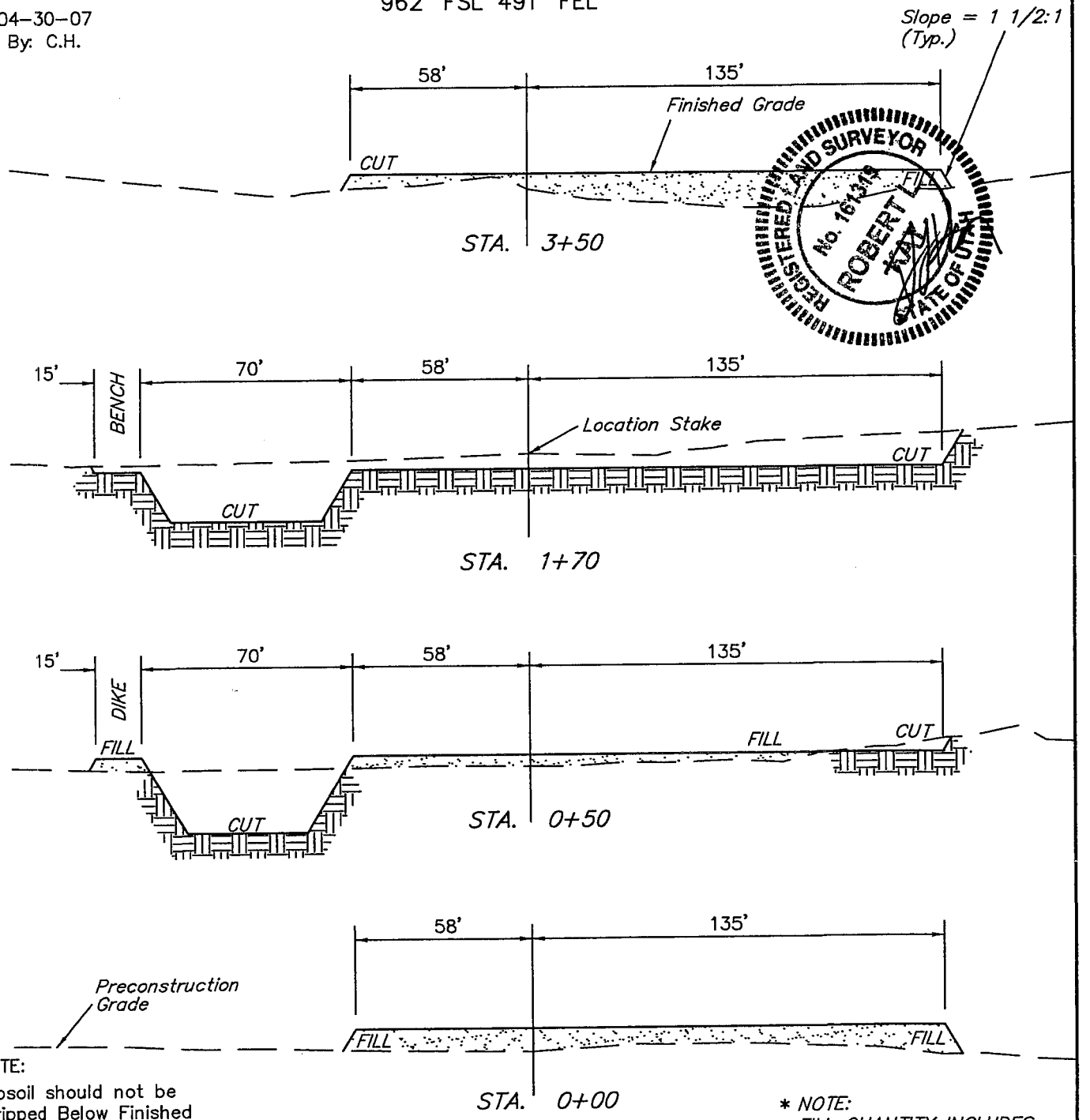
FIGURE #2

TYPICAL CROSS SECTIONS FOR

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.
962' FSL 491' FEL

1" = 20'
X-Section Scale
1" = 50'

DATE: 04-30-07
Drawn By: C.H.



REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH

NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

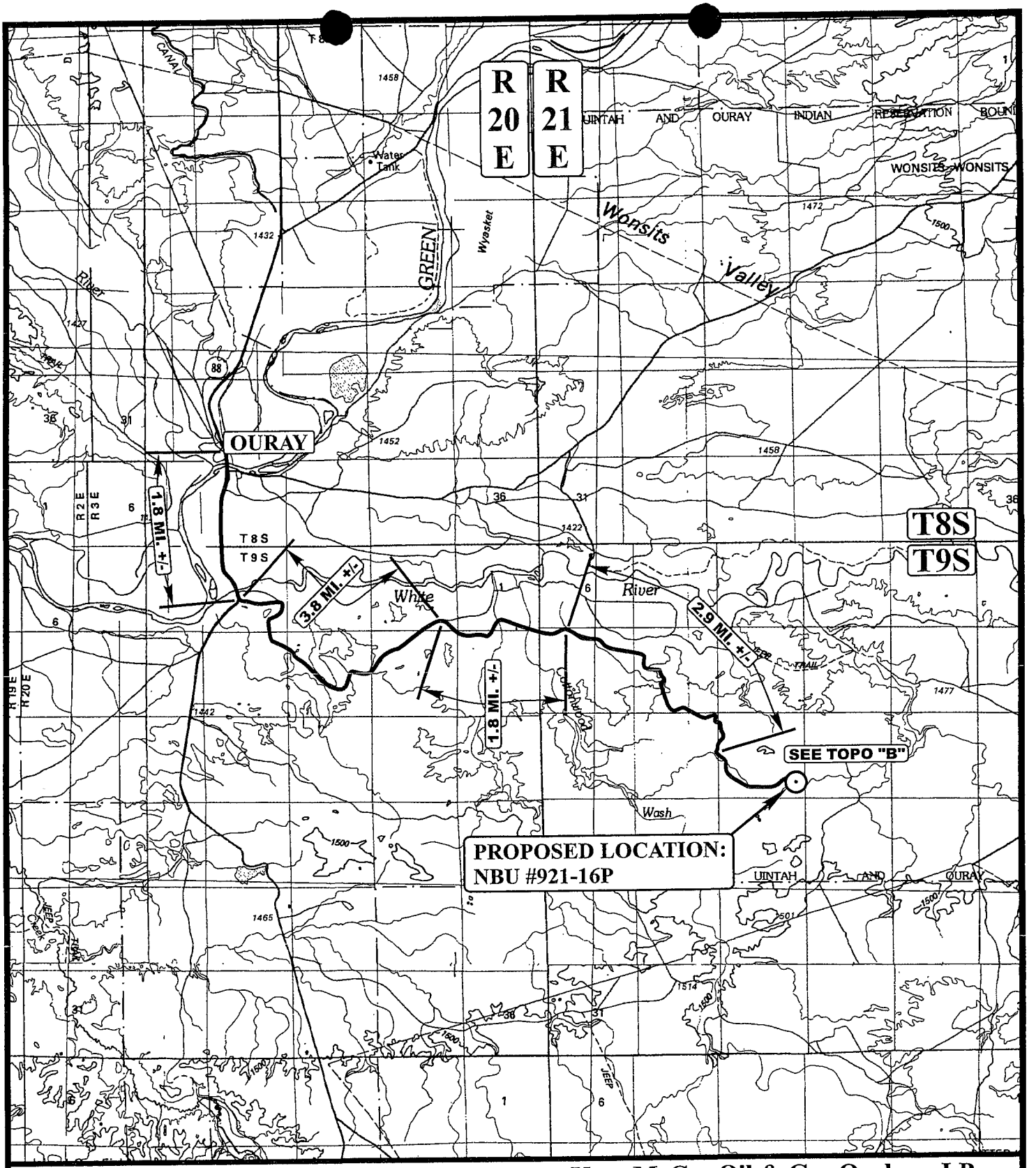
APPROXIMATE YARDAGES

CUT
(6") Topsoil Stripping = 1,680 Cu. Yds.
Remaining Location = 4,470 Cu. Yds.

TOTAL CUT = 6,150 CU.YDS.
FILL = 3,080 CU.YDS.

EXCESS MATERIAL = 3,070 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.) = 3,070 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation) = 0 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



LEGEND:

⊙ PROPOSED LOCATION

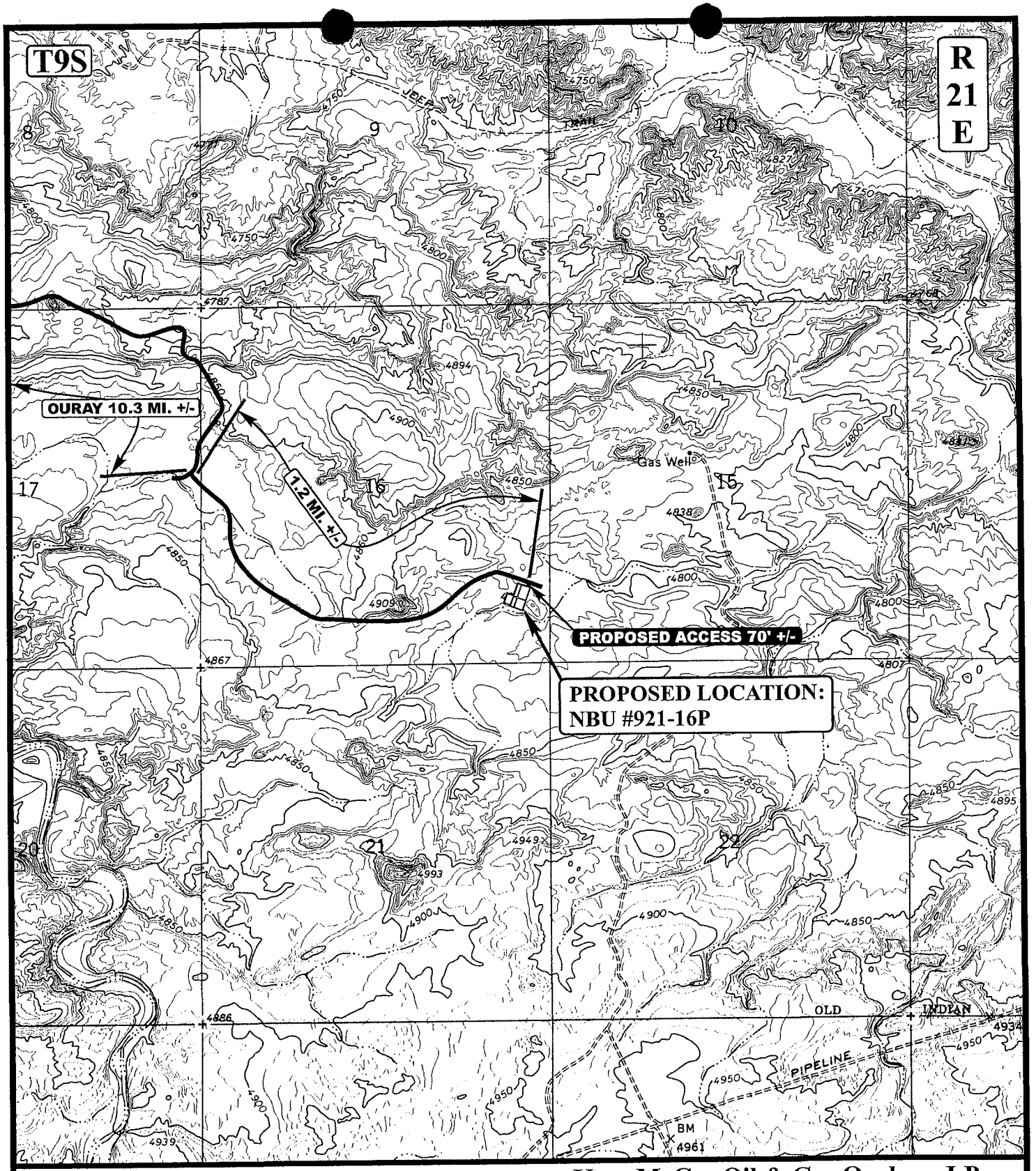
N

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.
962' FSL 491' FEL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	30 DAY	07 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.P.	REVISED: 04-24-07		



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

N

Kerr-McGee Oil & Gas Onshore LP

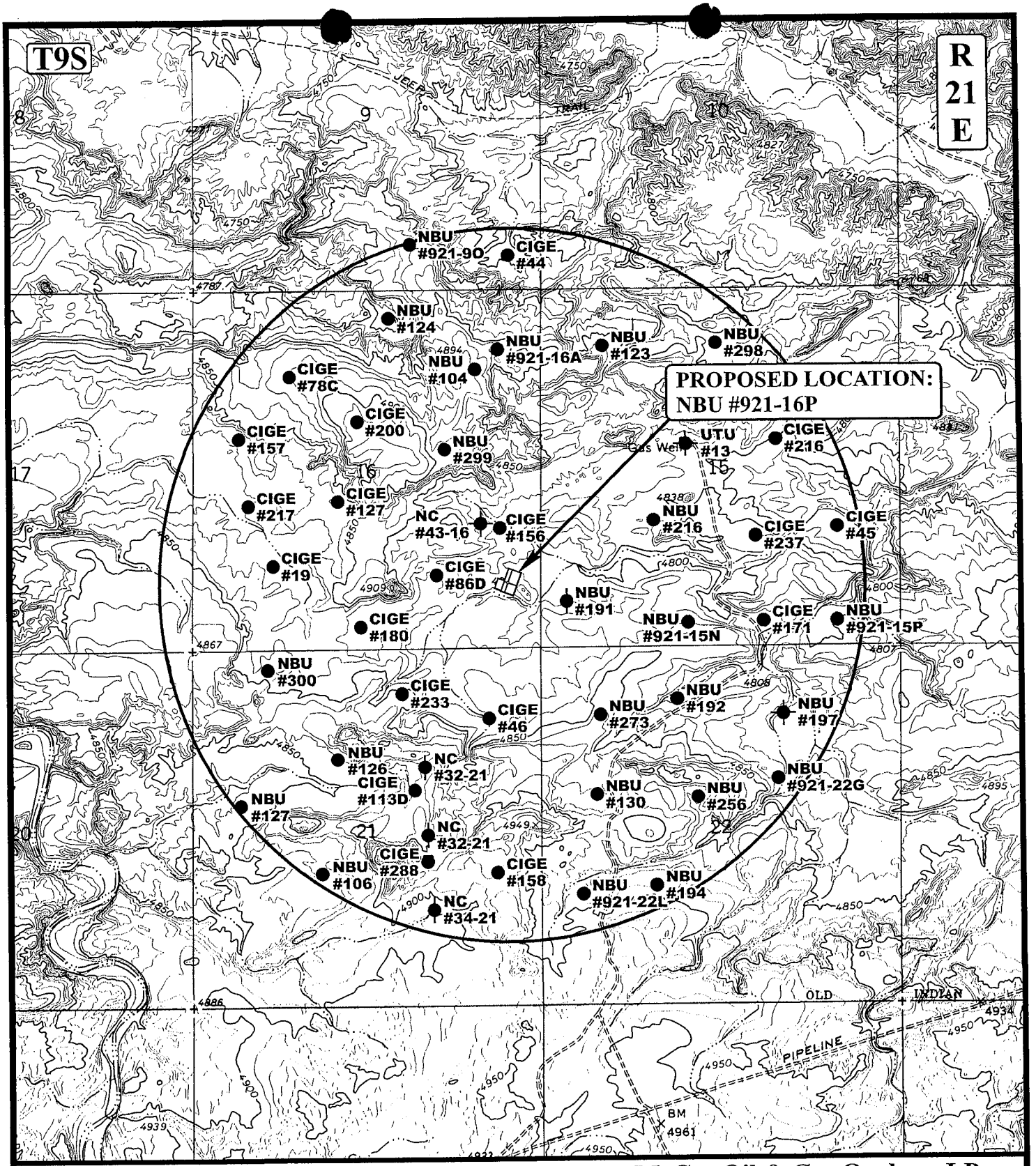
NBU #921-16P

SECTION 16, T9S, R21E, S.L.B.&M.

962' FSL 491' FEL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	30 DAY	07 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 04-24-07		



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

N

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.
962' FSL 491' FEL

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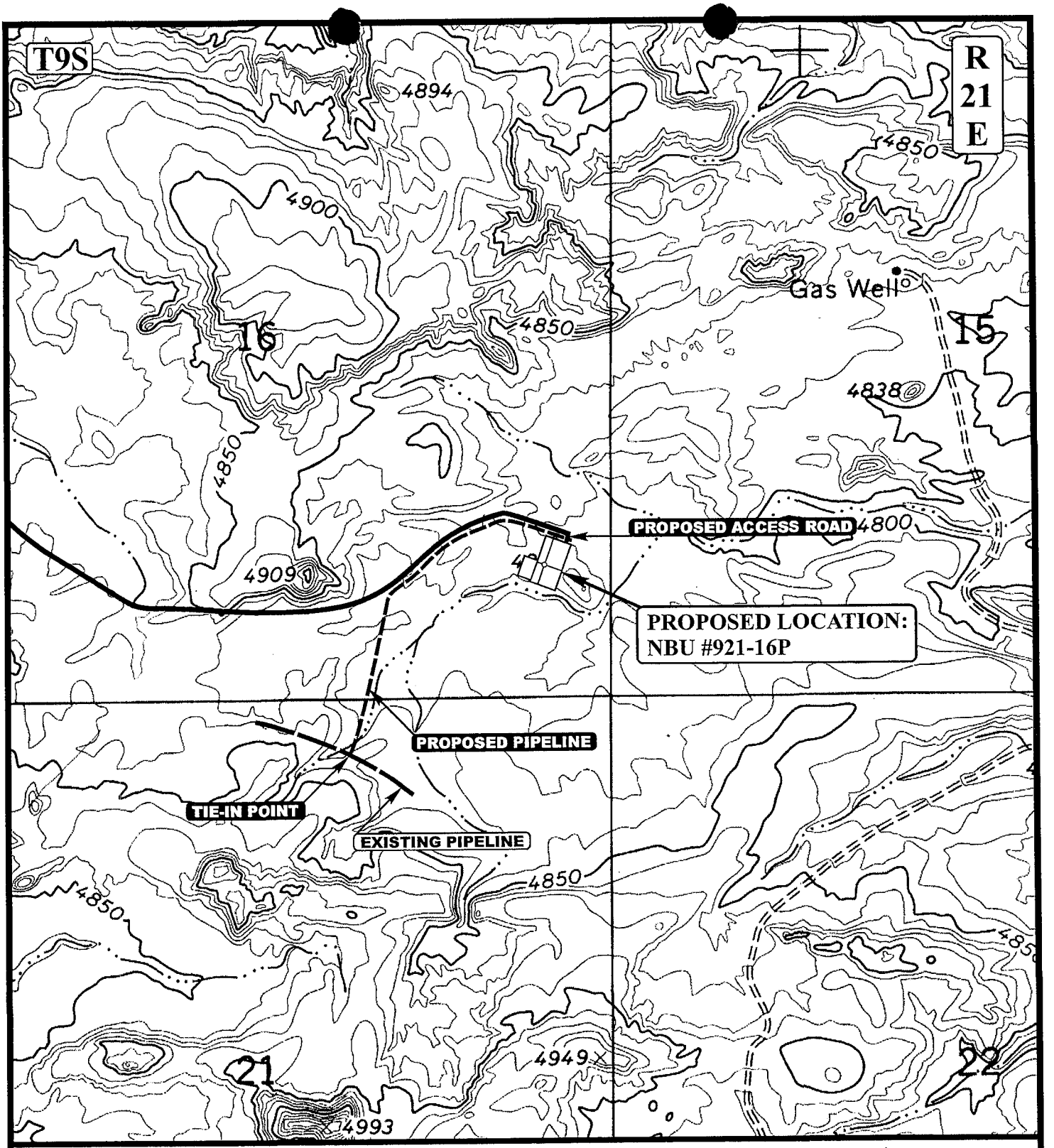
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	30 DAY	07 YEAR
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 04-24-07	C TOPO



APPROXIMATE TOTAL PIPELINE DISTANCE = 2,830' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P
SECTION 16, T9S, R21E, S.L.B.&M.
962' FSL 491' FEL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	01 MONTH	30 DAY	07 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: C.P.	REVISED: 04-24-07		

Kerr-McGee Oil & Gas Onshore LP

NBU #921-16P

PIPELINE ALIGNMENT

LOCATED IN UINTAH COUNTY, UTAH

SECTION 16, T9S, R21E, S.L.B.&M.

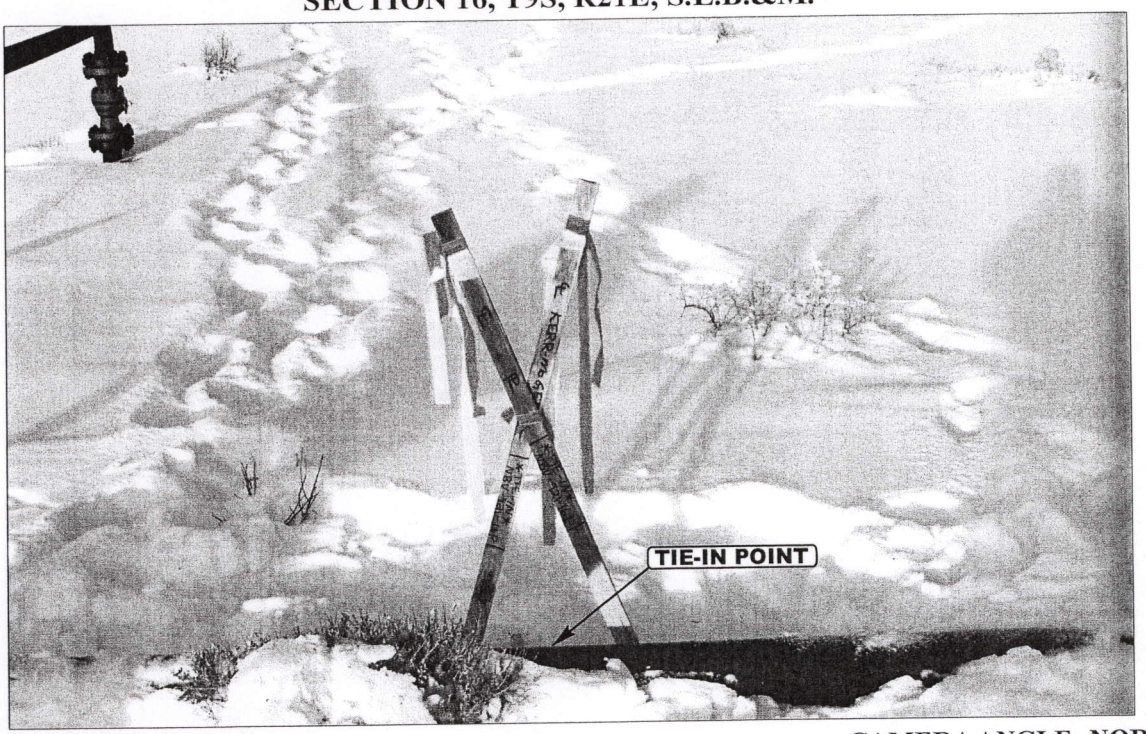


PHOTO: VIEW FROM TIE-IN POINT **CAMERA ANGLE: NORTHERLY**

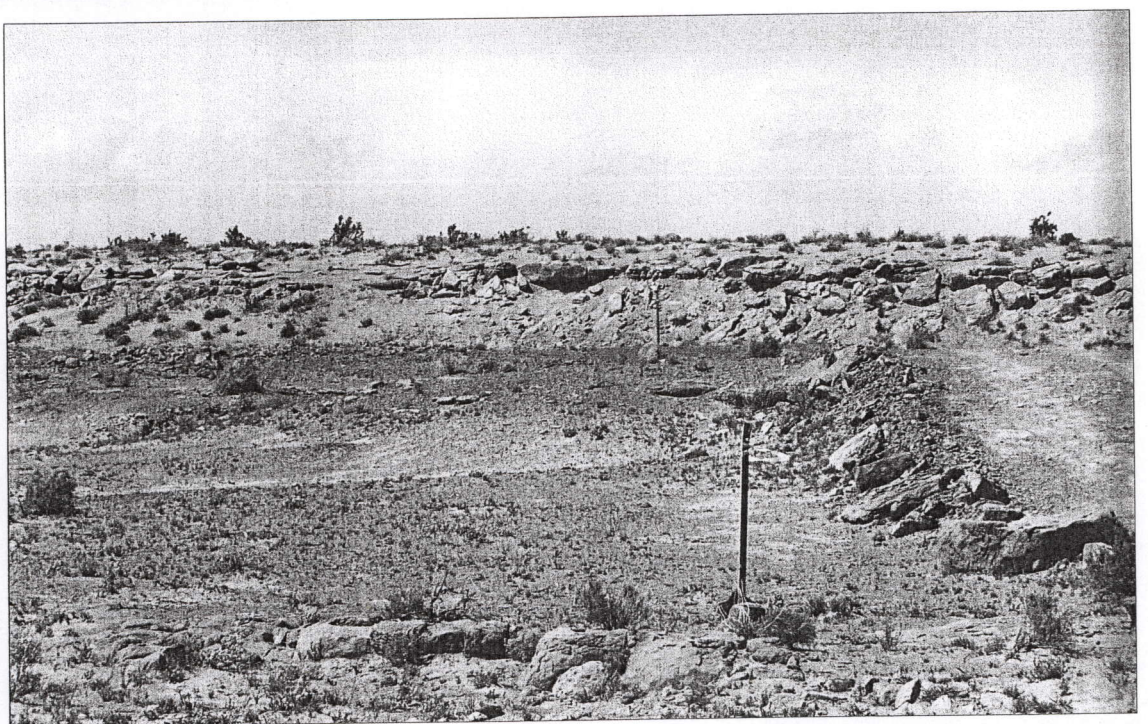


PHOTO: VIEW OF PIPELINE ALIGNMENT **CAMERA ANGLE: NORTHWESTERLY**

- Since 1964 -

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

PIPELINE PHOTOS	01 MONTH	30 DAY	07 YEAR	PHOTO
TAKEN BY: L.K.	DRAWN BY: C.P.	REVISED: 04-24-07		

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 04/23/2007

API NO. ASSIGNED: 43-047-39254

WELL NAME: NBU 921-16P

OPERATOR: KERR-MCGEE OIL & GAS (N2995)

PHONE NUMBER: 435-781-7024

CONTACT: SHEILA UPCHEGO

PROPOSED LOCATION:

SESE 16 090S 210E

SURFACE: 0962 FSL 0491 FEL

BOTTOM: 0962 FSL 0491 FEL

COUNTY: UINTAH

LATITUDE: 40.03146 LONGITUDE: -109.5435

UTM SURF EASTINGS: 623861 NORTHINGS: 4432048

FIELD NAME: NATURAL BUTTES (630)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DRD	6/30/08
Geology		
Surface		

LEASE TYPE: 3 - State

LEASE NUMBER: ML-3282-A

SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: WSMVD

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 22013542)

N Potash (Y/N)

Y Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 43-8496)

N RDCC Review (Y/N)
(Date:)

N/A Fee Surf Agreement (Y/N)

N/A Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: NATURAL BUTTES

___ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

___ R649-3-3. Exception

✓ Drilling Unit

Board Cause No: 173-14

Eff Date: 12-2-99

Siting: 460' W Lbdry & Unc Comm. Tract

___ R649-3-11. Directional Drill

COMMENTS: Sop, Separate File

STIPULATIONS: 1- Federal Approval
2 - Oil Shale
3 - Statement of Basis
4 - Surface Csg Cmt Stip

NATURAL BUTTES FIELD
NATURAL BUTTES UNIT

CAUSE: 173-14 / 12-2-1999

OPERATOR: KERR MCGEE O&G (N2995)

SEC: 16 T.9S R. 21E

FIELD: NATURAL BUTTES (630)

COUNTY: UINTAH

CAUSE: 173-14 / 12-2-1999

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING

Utah Oil Gas and Mining

N
W E
S

PREPARED BY: DIANA MASON

DATE: 26-JUNE-2007

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Ownr	CBM
497	43-047-39254-00-00		GW	I	No

Operator	KERR-MCGEE OIL & GAS ONSHORE, LP	**Surface Owner-APD**	
Well Name	NBU 921-16P	**Unit**	NATURAL BUTTES
Field	NATURAL BUTTES	**Type of Work**	
Location	SESE 16 9S 21E S 962 FSL 491 FEL	GPS Coord (UTM)	623861E 4432048N

Geologic Statement of Basis

Kerr McGee proposes to set 2,500' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 400'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 16. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed surface casing and cement should adequately protect ground water in this area.

Brad Hill	8/9/2007
APD Evaluator	**Date / Time**

Surface Statement of Basis

The surface rights at the proposed location are owned by the Ute Indian Tribe. The operator is responsible for obtaining all required permits and rights-of-way prior to making any surface disturbance or drilling the well.

Brad Hill	8/9/2007
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
	None.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, LP
Well Name NBU 921-16P
API Number 43-047-39254-0 **APD No** 497 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SESE **Sec** 16 **Tw** 9S **Rng** 21E 962 FSL 491 FEL
GPS Coord (UTM) **Surface Owner**

Participants

Regional/Local Setting & Topography

Surface Use Plan

Current Surface Use

New Road Miles | **Well Pad Width** | **Well Pad Length** | **Src Const Material** | **Surface Formation**

Ancillary Facilities

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetland

Flora / Fauna

Soil Type and Characteristics

Erosion Issues

Sedimentation Issues

Site Stability Issues

Drainage Diverson Required

Berm Required?

Erosion Sedimentation Control Required?

Paleo Survey Run? **Paleo Potental Observed?** **Cultural Survey Run?** **Cultural Resources?**

Reserve Pit

Site-Specific Factors **Site Ranking**

Distance to Groundwater (feet)
Distance to Surface Water (feet)
Dist. Nearest Municipal Well (ft)
Distance to Other Wells (feet)
Native Soil Type
Fluid Type
Drill Cuttings
Annual Precipitation (inches)
Affected Populations
Presence Nearby Utility Conduits

Final Score **Sensitivity Level**

Characteristics / Requirements

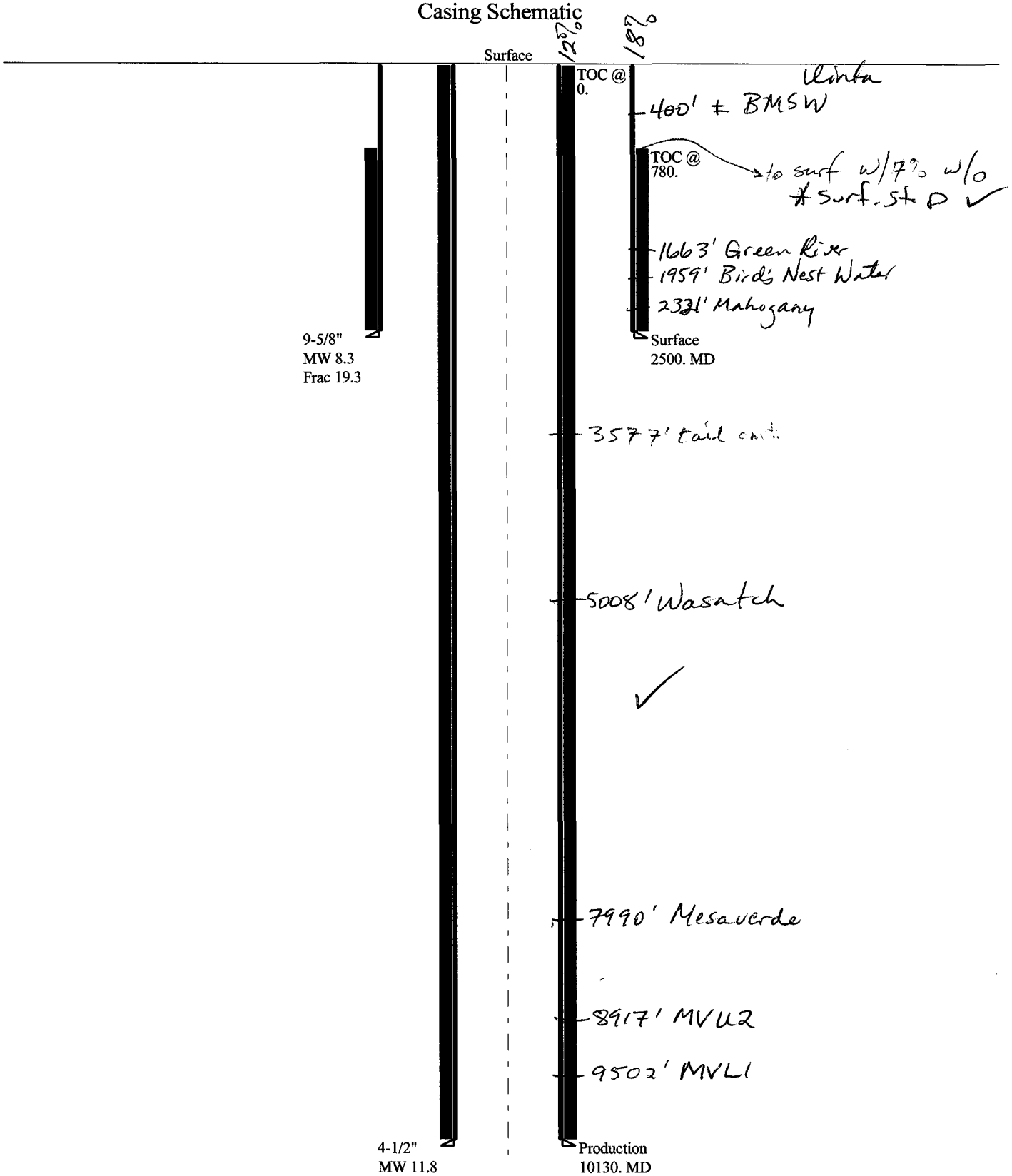
Closed Loop Mud Required?	**Liner Required?**	**Liner Thickness**	**Pit Underlayment Required?**

Other Observations / Comments

Brad Hill	8/9/2007
Evaluator	**Date / Time**

2008-06 Kerr McGee NBU 921-16I (rev/2007-04)

Casing Schematic



Well name:	**2008-06 Kerr McGee NBU 921-16P (rev/2007-04)**
Operator:	**Kerr McGee Oil & Gas Onshore L.P.**
String type:	Surface
Project ID:	43-047-39254
Location:	Uintah County, Utah

Design parameters:

Collapse

Mud weight: 8.300 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 2,200 psi

Internal gradient: 0.120 psi/ft

Calculated BHP 2,500 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

Tension is based on buoyed weight.

Neutral point: 2,193 ft

Environment:

H2S considered? No

Surface temperature: 75 °F

Bottom hole temperature: 110 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,400 ft

Cement top: 780 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 10,130 ft

Next mud weight: 11.800 ppg

Next setting BHP: 6,210 psi

Fracture mud wt: 19.250 ppg

Fracture depth: 2,500 ft

Injection pressure: 2,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	2500	9.625	36.00	J-55	ST&C	2500	2500	8.796	1085.1

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1078	2020	1.874	2500	3520	1.41	79	394	4.99 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Minerals — Phone: (801) 538-5357, FAX: (801) 359-3940 — Date: June 27,2008, Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2500 ft, a mud weight of 8.3 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**2008-06 Kerr McGee NBU 921-16P (rev/2007-04)**
Operator:	**Kerr McGee Oil & Gas Onshore L.P.**
String type:	Production
Project ID:	43-047-39254
Location:	Uintah County, Utah

Design parameters:

Collapse

Mud weight: 11.800 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 3,981 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 6,210 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 8,343 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 217 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: Surface

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	10130	4.5	11.60	I-80	LT&C	10130	10130	3.875	884

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6210	6360	1.024	6210	7780	1.25	97	212	2.19 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Minerals
Phone: (801) 538-5357
FAX: (801) 359-3940
Date: June 27,2008
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 10130 ft, a mud weight of 11.8 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

BOPE REVIEW — Kerr-McGee NBU 921-16P API 43-047-39254

INPUT

Well Name	Kerr-McGee NBU 921-16P API 43-047-39254			
	String 1	String 2		
Casing Size (")	9 5/8	4 1/2		
Setting Depth (TVD)	2500	10130		
Previous Shoe Setting Depth (TVD)	40	2500		
Max Mud Weight (ppg)	8.3	11.8		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3520	10690		
Operators Max Anticipated Pressure (psi)	6281	11.9 ppg		

Calculations	String 1	9 5/8 "	
Max BHP [psi]	.052*Setting Depth*MW =	1079	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	779	NO Air Drill to surface shoe
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	529	NO
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	529	← NO - no expected pressure
Required Casing/BOPE Test Pressure		2464	psi
***Max Pressure Allowed @ Previous Casing Shoe =**		40	psi

Calculations	String 2	4 1/2 "	
Max BHP [psi]	.052*Setting Depth*MW =	6216	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) [psi]	Max BHP-(0.12*Setting Depth) =	5000	NO
MASP (Gas/Mud) [psi]	Max BHP-(0.22*Setting Depth) =	3987	YES ✓
			***Can Full Expected Pressure Be Held At Previous Shoe?**
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	4427	← NO Reasonable
Required Casing/BOPE Test Pressure		5000	psi
***Max Pressure Allowed @ Previous Casing Shoe =**		2500	psi *Assumes 1psi/ft frac gradient

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

April 25, 2007

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2007 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2007 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Wasatch/MesaVerde)		
43-047-39237	NBU 921-8B	Sec 08 T09S R21E 0528 FNL 2080 FEL
43-047-39238	NBU 921-8H	Sec 08 T09S R21E 1870 FNL 0837 FEL
43-047-39239	NBU 921-8P	Sec 08 T09S R21E 0533 FSL 0578 FEL
43-047-39240	NBU 921-9K	Sec 09 T09S R21E 2633 FSL 2383 FWL
43-047-39241	NBU 921-9C	Sec 09 T09S R21E 0896 FNL 1569 FWL
43-047-39254	NBU 921-16P	Sec 16 T09S R21E 0537 FSL 0610 FEL
43-047-39255	NBU 921-18D	Sec 18 T09S R21E 0550 FNL 0827 FWL
43-047-39256	NBU 921-21L	Sec 21 T09S R21E 1785 FSL 0797 FWL
43-047-39242	NBU 921-10H	Sec 10 T09S R21E 1472 FNL 1104 FEL
43-047-39243	NBU 921-13H	Sec 13 T09S R21E 2323 FNL 0531 FEL
43-047-39244	NBU 921-13E	Sec 13 T09S R21E 1818 FNL 0851 FWL
43-047-39245	NBU 921-13LT	Sec 13 T09S R21E 1465 FSL 0792 FWL
43-047-39246	NBU 921-14B	Sec 14 T09S R21E 0822 FNL 1764 FEL
43-047-39247	NBU 921-14D	Sec 14 T09S R21E 0465 FNL 0542 FWL
43-047-39248	NBU 921-14P	Sec 14 T09S R21E 0878 FSL 1163 FEL
43-047-39249	NBU 921-14A	Sec 14 T09S R21E 1239 FNL 0883 FEL
43-047-39250	NBU 921-14G	Sec 14 T09S R21E 2319 FNL 1996 FEL
43-047-39251	NBU 921-14H	Sec 14 T09S R21E 2088 FNL 0422 FEL
43-047-39252	NBU 921-15E	Sec 15 T09S R21E 2184 FNL 0636 FWL
43-047-39253	NBU 921-15L	Sec 15 T09S R21E 2015 FSL 0713 FWL

We have no objections to permitting the wells so long as the unit operator receives an exception to the locating and siting requirements of the State of Utah (R649-3-2).

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:4-25-07

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

June 28, 2007

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2007 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well's location has changed from that identified in our memo of April 25, 2007. It is planned for calendar year 2007 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION

(Proposed PZ Wasatch/MesaVerde)

43-047-39254 NBU 921-16P Sec 16 T09S R21E 0962 FSL 0491 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:6-28-07

Helen Sadik-Macdonald - Surface Casing changes

From: "Laney, Brad"
To:
Date: 09/07/2007 3:26 PM
Subject: Surface Casing changes
CC: "Upchego, Sheila" , "Worthen, Rebecca"

Helen,

The following wells will have 36# casing run in them for the entire surface casing interval.

NBU 921-16P
NBU 921-16J
NBU 921-16HT
NBU 921-16MT
NBU 921-25NT
NBU 921-34MT

Anadarko is currently in the process of converting all future wells to a 36# surface casing string but we will continue to utilize our existing inventory of 32.3# until sometime in October. All future permits will reflect the changes to the surface casing. If you need any additional paperwork or have any questions, let me know.

Thanks again
Brad

Helen Sadik-Macdonald - RE: Tribal 822-31O, NBU 921-16P

From: "Laney, Brad"
To: "Helen Sadik-Macdonald"
Date: 06/20/2008 3:59 PM
Subject: RE: Tribal 822-31O, NBU 921-16P
CC: "Dustin Doucet"

Dustin,

Sorry for the delayed response on these two APD issues.

First, I will address the Tribal 822-31O surface casing issue. As you are aware, as part of our field standard operating procedure (SOP) we have switched all of our surface casing to the requested 36# J55 for the entire field so the 822-31O surface casing string will utilize the stronger casing as requested by UDOGM.

Secondly, both the Tribal 822-31O and the NBU 921-16P will be drilled to ±10150'. Helen has stated that UDOGM does not make exceptions to pipe which does not meet the 1.125 collapse and 1.00 burst, and, therefore, is requesting Anadarko to run P110 below 9200'. It is Anadarko's Natural Buttes SOP to run I80 casing to depths of ±10200' even though the collapse and burst may not meet your requirements. Anadarko operates in this manner for the following reasons.

1. Standard running procedures include filling the pipe at the surface casing shoe and at least one additional time (usually at the top of the Mesaverde formation or ±2000' from TD) before reaching TD. This ensures the pipe to be over half full with drilling mud before reaching TD which prevents collapse from occurring.

2. Our standard cementing procedure brings cement all the way back to surface and once it sets, provides support around the casing for burst and collapse. After the cement hardens, the casing will only collapse if there is a plastic formation like a salt. In Natural Buttes, no plastic formations are found. Before stimulating the well for the initial completion, the wellhead and casing are pressure tested for burst. The stimulating pressures are consistently greater than 5000 psi and, to my knowledge, only one time has the casing ever failed due to burst. It was later determined that the casing failed due to a quality control issue during the manufacturing process.

Anadarko has set I80 production casing many times below 9200' in comparable wells with comparable pressures. In fact, earlier this month we set 10,300' of I80 in the NBU 921-9C well bore. Therefore, I am requesting approval of the Tribal 822-31O and NBU 921-16P proposed casing designs.

If you need further detail, have any questions, or would like this request to be submitted on a sundry, please give me a call.

Thanks

Anadarko Petroleum Corporation

Brad Laney Drilling Engineer, Uinta Basin
Anadarko Petroleum Corp., 1368 South 1200 East, Vernal, UT 84078
office: 435.781.7031
cell: 435.828.5469 email: brad.laney@anadarko.com

From: Helen Sadik-Macdonald [mailto:hmacdonald@utah.gov]
Sent: Wednesday, April 23, 2008 4:53 PM
To: Laney, Brad
Cc: Dustin Doucet
Subject: Tribal 822-31O, NBU 921-16P

Brad,
Congratulation to Anadarko/Kerr-McGee on your awards. Hope your return to Vernal was uneventful.

Comments on the above-cited wells:
These two wells are proposed at 10180' and 10130' TD, respectively. We run our analysis of pipe grade with design factors of 1.125 collapse and 1.00 burst on evacuated pipe. We do not make exceptions to pipe meeting design factors on surface and production strings for several reasons. Chief among those reasons is to provide adequate protection of fresh ground water resources (surface casing) and to prevent collapse and corrosion issues over time in the production string.

We occasionally will apply an annular backup to intermediate casing if it does not quite meet design criteria. We do this because it not only is reinforced by cement, but the production string will add an additional layer of protection.

Production casing is affected by perfs, formation fluids, stimulating fluids, lifting mechanisms, etc. in addition to formation pressure. Therefore, meeting design factors of 1.125-collapse and 1.00-burst is the Division's minimum standard to delay wear and tear.

Both of these wells will pass collapse if 11.6# P-110 is set below 9200 feet. Some other design of your choosing is acceptable if it meets design criteria. Additionally, the Tribal 822-31O needs the surface string upgraded to 36# J-55. I do not have an e-mail from you stating this change. I do have said e-mail for the 16P. Thank you. hsm

Helen Sadik-Macdonald, CPG, PG
Petroleum Engineering Services
Utah Div. of Oil, Gas & Mining
PO Box 145801
Salt Lake City, UT 84114-5801

801/538-5357 Desk
801/359-3940 Fax

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

July 7, 2008

Kerr-McGee Oil & Gas Onshore LP
1368 S 1200 E
Vernal, UT 84078

Re: NBU 921-16P Well, 962' FSL, 491' FEL, SE SE, Sec. 16, T. 9 South, R. 21 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39254.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal Office
SITLA

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Operator: Kerr-McGee Oil & Gas Onshore LP

Well Name & Number NBU 921-16P

API Number: 43-047-39254

Lease: ML-3282-A

Location: SE SE **Sec.** 16 **T.** 9 South **R.** 21 East

Conditions of Approval

1. **General**

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**

   The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

   - 24 hours prior to cementing or testing casing – contact Dan Jarvis
   - 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
   - 24 hours prior to spudding the well – contact Carol Daniels
   - Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
   - Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

   The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

   - Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
   - Any changes to the approved drilling plan – contact Dustin Doucet

   The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

   - Dan Jarvis at: (801) 538-5338 office (801) 942-0871 home
   - Carol Daniels at: (801) 538-5284 office
   - Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

3. **Reporting Requirements**

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.

7. Surface casing shall be cemented to the surface.

8. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 6/26/2009	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: June 23, 2009

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 6/23/2009

RECEIVED June 23, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047392540000

API: 43047392540000
Well Name: NBU 921-16P
Location: 0962 FSL 0491 FEL QTR SESE SEC 16 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 7/7/2008

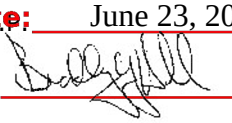
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 6/23/2009
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: June 23, 2009

By: 

RECEIVED June 23, 2009

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 6/26/2009	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 6/23/2009

RECEIVED June 23, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047392540000

API: 43047392540000
Well Name: NBU 921-16P
Location: 0962 FSL 0491 FEL QTR SESE SEC 16 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 7/7/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
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- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Danielle Piernot **Date:** 6/23/2009
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED June 23, 2009

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: July 13, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE		**DATE**
N/A		7/7/2010

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047392540000

API: 43047392540000
Well Name: NBU 921-16P
Location: 0962 FSL 0491 FEL QTR SESE SEC 16 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 7/7/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

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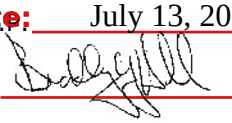
Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 7/7/2010
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: July 13, 2010

By: 

RECEIVED July 07, 2010

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

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7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

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FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 10/4/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	✓ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
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☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the total depth (TD) to include the Blackhawk formation, which is in the Mesaverde group for this well. Please see the attached for additional details. All of the original information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: October 06, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE		**DATE**
N/A		9/28/2010

RECEIVED September 28, 2010

Well name:	**43047392540000 NBU 921-16Prev.**
Operator:	**Kerr McGee Oil & Gas Onshore L.P.**
String type:	Production
Project ID:	43-047-39254-0000
Location:	Uintah County, Utah

Design parameters:

Collapse

Mud weight: 12.800 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 5,015 psi
Internal gradient: ~~0.220~~ psi/ft
Calculated BHP 7,494 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 9,114 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature:	233 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,500 ft
Cement top:	1,724 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	11271	4.5	11.60	HCP-110	LT&C	11271	11271	3.875	983.6

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	7494	8650	1.154	7494	10690	1.43	106	279	2.64 J

Approved by the Utah Division of Oil, Gas and Mining

Date: October 06, 2010

By:

Prepared by: Dustin K. Doucet, Div of Oil,Gas & Mining
Phone: (801) 538-5281
FAX: (801) 359-3940
Date: October 6,2010
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 11271 ft, a mud weight of 12.8 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	September 28, 2010
WELL NAME	**NBU 921-16P**			TD	11,271' TVD 11,271' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,810'
SURFACE LOCATION	SE/4 SE/4	962' FSL	491' FEL	Sec 16	T 9S	R 21E	BHL	Straight Hole
	Latitude: 40.031494		Longitude: -109.549075			NAD 83		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde							
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.							

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'	14"		
			11"	8-5/8", 28#, IJ-55, LTC	Air mist

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @	**1,644'**
Top of Birds Nest @	**1,995**
Mahogany @	**2,350**
Preset f/ GL @	**2,800' MD**

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Wasatch @	**5,043' TVD**

Mud logging program TBD

Cased hole logging program from TD - surf csg

Mverde @	**8,024' TVD**
MVU21 @	**8,973' TVD**
MVU1 @	**9,486' TVD**
Sego @	**10,273' TVD**
Castlegate @	**10,329' TVD**
MN5 @	**10,723' TVD**

			7-7/8"	4-1/2" 11.6# HCP-110 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-12.8 ppg
Max anticipated Mud required 12.8 ppg	TD @	11,271' TVD 11,271' MD			

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'								
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,800'	28.00	IJ-55	LTC	0.67	1.43	4.39
								10,690	8,650	367,000
PRODUCTION	4-1/2"	0	to	11,271'	11.60	HCP-110	BTC	4.31	1.15	3.49

*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above. D.F. = 1.92

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)
(Burst Assumptions: TD = 12.8 ppg) 0.22 psi/ft = gradient for partially evac wellbore
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MASP 4,894 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD
(Burst Assumptions: TD = 12.8 ppg) 0.65 psi/ft = bottomhole gradient
(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)
MABHP 7,373 psi

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,300'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,541'	Premium Lite II + 3% KCl + 0.25 pps	340	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,730'	50/50 Poz/G + 10% salt + 2% gel	1,410	20%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: John Huycke / Emile Goodwin

DRILLING SUPERINTENDENT: John Merkel / Lovel Young

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By ANDY LYTLE Phone Number 720.929.6100
Well Name/Number NBU 921-16P
Qtr/Qtr SESE Section 16 Township 9S Range 21E
Lease Serial Number ML-3282-A
API Number 4304739254

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 10/11/2010 09:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED
OCT 08 2010
DIV. OF OIL, GAS & MINING

Date/Time 10/22/2010 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

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8. WELL NAME and NUMBER: NBU 921-16P

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COUNTY: UINTAH

STATE: UTAH

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MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/ 28 SX READY MIX. SPUD WELL LOCATION ON OCTOBER 12, 2010 AT 09:00 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
October 21, 2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 10/15/2010

RECEIVED October 15, 2010

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217
Phone Number: (720) 929-6100

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751186	NBU 922-29H1BS		NENE	29	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	10/13/2010			10/19/10	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 10/13/2010 AT 08:00 HRS. BHL=SENE

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304739254	NBU 921-16P		SESE	16	9S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	10/12/2010			10/19/10	

Comments: MIRU PETE MARTIN BUCKET RIG. WSMVD
SPUD WELL LOCATION ON 10/12/2010 AT 09:00 HRS.

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

ANDY LYTLE
Name (Please Print)
Signature
REGULATORY ANALYST
Title
10/18/2010
Date

RECEIVED
OCT 18 2010
DIV. OF OIL, GAS & MINING

(5/2000)

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 10/19/2010	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU PROPETRO AIR RIG ON OCTOBER 16, 2010. DRILLED 11" SURFACE HOLE TO 2840'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 20 BBLS FRESH WATER. PUMP 20 BBLS GEL WATER. LEAD CEMENT W/ 220 SX CLASS G PREM @ 11.0 PPG, 3.82 YD. TAILED CEMENT W/ 200 SX CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. DROP PLUG ON THE FLY, DISPLACED W/ 174.9 BBLS WATER. PARTIAL RETURNS. LIFT PRESSURE WAS 100 PSI, BUMP PLUG & HOLD 700 PSI FOR 5 MIN. FLOAT HELD. EST TOC OF TAIL @ 1490'. TOP OUT W/ 225 SX SAME CEMENT DOWN 1" BACK SIDE. WORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
October 25, 2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 10/20/2010

RECEIVED October 20, 2010

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 12/22/2010	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

FINISHED DRILLING FROM 2840' TO 11,290' ON DECEMBER 19, 2010. RAN 4 ½" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 655 SX CLASS G PREM LITE @ 13.2 PPG, 1.69 YD. TAILED CEMENT W/ 1390 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YD. DISPLACED W/ 174 BBLS CLAYTREAT WATER, 155 BBLS INTO DISPLACEMENT LOST RETURNS, 20 BBLS SPACER TO PIT, 2.5 BACK TO TRUCK. PLUG BACK TO 11,248'. BUMPED PLUG W/ 3800 PSI, 500 OVER FINAL LIFT OF 3300 PSI. RD CEMENTERS AND CLEANED PITS. RELEASED PIONEER RIG #54 ON DECEMBER 22, 2010 @ 06:00 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
12/22/2010

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 12/22/2010

RECEIVED December 22, 2010

API Well No: 43047392540000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-3282-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-16P

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047392540000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0962 FSL 0491 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 16 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 2/7/2011	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON FEBUARY 07, 2011 AT 7:00 P.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

2/9/2011

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Andy Lytle	720 929-6100	Regulatory Analyst
SIGNATURE N/A		**DATE** 2/9/2011

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 3282A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE TRIBE
7. UNIT or CA AGREEMENT NAME: UTU63047A
8. WELL NAME and NUMBER: NBU 921-16P
9. API NUMBER: 4304739254
10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6100

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SESE 962 FSL 491 FEL S16, T9S, R21E
AT TOP PRODUCING INTERVAL REPORTED BELOW:
AT TOTAL DEPTH:

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 16 9S 21E S

12. COUNTY: UINTAH 13. STATE: UTAH

14. DATE SPUDDED: 10/12/2010 15. DATE T.D. REACHED: 12/19/2010 16. DATE COMPLETED: 2/7/2011 ABANDONED ☐ READY TO PRODUCE ☑ 17. ELEVATIONS (DF, RKB, RT, GL): 4810 GL

18. TOTAL DEPTH: MD 11,290 TVD 11,285 19. PLUG BACK T.D.: MD 11,269 TVD 11,264 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL-BHP-HDIL/ZDL/CNGR

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☑ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		2,816		645		0	
7 7/8"	4 1/2" P110	11.6#		11,285		2,045		150	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	9,969							

26. PRODUCING INTERVALS WSMVD

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	8,302	11,080		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
8,302 11,080	0.36	178	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
8302 - 11,080	PUMP 12,558 BBLS SLICK H2O & 377,101 LBS 30/50 SAND

29. ENCLOSED ATTACHMENTS:
☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☐ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: PROD

RECEIVED
MAR 29 2011
DIV. OF OIL, GAS & MINING

(5/2000) (CONTINUED ON BACK)

31. INITIAL PRODUCTION — **INTERVAL A (As shown in Item #26)**

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
2/7/2011	2/11/2011	24		0	2,746	271	FLOWING

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
18/64	2,300	3,000					0	2,746	271	PROD

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,644				
BIRD'S NEST	1,995				
MAHOGANY	2,350				
WASATCH	5,041	7,997			
MESAVERDE	7,997	11,290	TD		

35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history and final survey. Completion chrono details individual frac stages.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE TITLE REGULATORY ANALYST

SIGNATURE DATE 3/22/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/16/2010	8:00 - 23:00	15.00	MIRU	01	A	P		MOVE RIG ONTO LOCATION, DRESS TOP OF CONDUCTOR. INSTALL DIVERTER HEAD AND BOWIE LINE. BUILD DITCH. MOVE RIG OVER HOLE AND RIG UP.. SET CATWALK AND PIPE RACKS. RIG UP AND PRIME PIT PUMP AND MUD PUMP.
	23:00 - 0:00	1.00	MAINT	08	B	X		WORK ON PUMP, SUCTION MANIFOLD CRACKED.
10/17/2010	0:00 - 8:00	8.00	MAINT	08	B	X		WORK ON MUD PUMP AND PIT PUMP
	8:00 - 8:30	0.50	PRPSPD	01	B	P		P/U STRAIGHT HOUSING HUNTING MTR SN 8085. 7/8 LOBE .16 RPM. M/U Q506 SN 701794 1ST RUN, W/ 6-18'S. INSTALL RUBBER.
	8:30 - 0:00	15.50	DRLSUR	02	A	P		SPUD SURFACE 10/17/2010 @ 08:30 HRS. DRILL 11" SURFACE HOLE F/40'- 1420' (1380' 89'/HR) PSI ON/ OFF 1150/1000, UP/ DOWN/ ROT 51/45/48. SURVEY @ 500' 1 DEG, SURVEY @ 1000' = .5 DEG
10/18/2010	0:00 - 20:30	20.50	DRLSUR	02	A	P		DRILL 11" SURFACE HOLE F/1420'-2840' (1420' 69'/HR) PSI ON/ OFF 1320/1120, UP/ DOWN/ ROT 67/62/65. SURVEY @ 2800' .7 DEG 229 AZ; DRLG W/ H20, FULL RETURNS
	20:30 - 22:00	1.50	DRLSUR	05	A	P		CIRC AND COND HOLE CLEAN
	22:00 - 0:00	2.00	DRLSUR	06	A	P		TOOH, LDDS AND BHA
10/19/2010	0:00 - 2:30	2.50	DRLSUR	06	A	P		TOOH, LDDS AND BHA
	2:30 - 5:30	3.00	DRLSUR	05	A	S		CIRCULATE OUT GAS WHILE WAITING FOR LOAD OF MUD TO KILL WELL.
	5:30 - 6:30	1.00	DRLSUR	06	A	P		FINISH LAYING DOWN BHA
	6:30 - 7:30	1.00	CSG	12	A	P		MOVE CATWALK AND PIPE RACKS, MOVE CSG OVER TO WORK AREA
	7:30 - 11:30	4.00	CSG	12	C	P		HOLD SAFETY MEETING, RUN CSG. RAN 63JTS OF 8-5/8", 28#, IJ-55, 8 RND CSG W/ LTC THREADS. LANDED FLOAT SHOE @ 2797' KB. RAN BAFFLE PLATE IN TOP OF SHOE JT LANDED 2750.90' KB. FILL CSG @ 500', 1500', AND 2790'.
	11:30 - 12:00	0.50	RDMO	01	E	P		RIG DOWN RIG, MOVE OUT, RELEASE RIG 10/19/2010 @ 12:00

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	12:00 - 16:00	4.00	CSG	12	E	P		HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 20 BBLS OF 8.3# H20 AHEAD. FULL CIRC. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. FULL CIRC. PUMP 220 SX (149.6 BBLS) OF 11# 3.82 YIELD LEAD CMT, PUMP 200 SX (40.9 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). FULL CIRC. DROP PLUG ON FLY AND DISPLACE W/174.9 BBLS OF 8.3# H20. PARTIAL RETURNS. LIFT PRESSURE WAS 100 PSI, BUMP PLUG AND HOLD 700 PSI FOR 5 MIN. FLOAT HELD. EST TOC OF TAIL 1490' TOP OUT DOWN 1" PUMP 125 SX (25.6 BBLS), PUMP 100 SX (20.4 BBLS) DOWN BACK SIDE OF 15.8# 1.15 YIELD TAIL(4 % CALC, 1/4# /SK OF FLOCELE). RIG DOWN CEMENTERS AND RELEASE CEMENTERS 16:00 HRS. CONDUCTOR CASING: Cond. Depth set: 40' Cement sx used: 28 SPUD DATE/TIME: 10/17/2010 18:30 SURFACE HOLE: Surface From depth: 40' Surface To depth: 2,840 Total SURFACE hours: 36 Surface Casing size: 8.625" # of casing joints ran: 63 Casing set MD: 2,797' # sx of cement: 220 SKS LEAD, 425 SKS TAIL AND TOP OUT Cement blend (ppg:) 11# LEAD, 15.8# ON TAIL CMTS Cement yield (ft3/sk): 3.82 LEAD, 1.15 YIELD ON TAIL CMTS # of bbls to surface:0BBL Describe cement issues: FULL CIRC DURING CMT JOB Describe hole issues: GASSY
12/7/2010	18:00 - 0:00	6.00	DRLPRO	01	E	P		RDRT PREPARE TO MOVE TO NBU 921-16P
12/8/2010	0:00 - 7:00	7.00	DRLPRO	01	E	P		RDRT
	7:00 - 18:00	11.00	DRLPRO	01	A	P		MOVE RIG TO NBU 921-16P, 80% MOVED
	18:00 - 0:00	6.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
12/9/2010	0:00 - 7:00	7.00	DRLPRO	21	C	P		WAIT ON DAYLIGHT
	7:00 - 17:00	10.00	DRLPRO	01	A	P		FINISH RIG MOVE, TRUCKS & CRANE LEFT LOC @ 17:00
	17:00 - 0:00	7.00	DRLPRO	01	B	P		RURT
12/10/2010	0:00 - 4:00	4.00	DRLPRO	14	A	P		N/U BOPE
	4:00 - 9:00	5.00	DRLPRO	15	A	P		TEST BOPE, RAMS & ALL VALVES 250 LOW 5000 HIGH, ANN 250-2500, CASING 1500 F/ 30 MIN
	9:00 - 9:30	0.50	DRLPRO	14	B	P		INSTALL WEAR BUSHING
	9:30 - 0:00	14.50	DRLPRO	08	B	P		SCHEDULED MAINTENANCE, REPLACE SEALS IN TOPDRIVE, INSTALL NEW LINE ON SERVICE LOOP
12/11/2010	0:00 - 13:00	13.00	DRLPRO	08	B	P		SHEDULED MAINTANANCE, REPAIR TOPDRIVE

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	13:00 - 18:00	5.00	DRLPRO	06	A	P		HPJSM W/ RIG & P/U CREWS, P/U BIT-MM-DIR TOOLS & SCRIBE, P/U BHA & 52 JTS D/P & R.D P/U CREW
	18:00 - 20:00	2.00	DRLPRO	08	A	P		CHANGE OUT SAVER SUB & TOR 2 COMPRESSION RINGS ON TOPDRIVE
	20:00 - 20:30	0.50	DRLPRO	14	B	P		INSTALL ROT RUBBER, PSI TEST MUD LINES, PRE-SPUD INSPECTION
	20:30 - 21:30	1.00	DRLPRO	08	B	P		REBUILD SWIVEL PACKING QUICK CHANGE
	21:30 - 23:30	2.00	DRLPRO	02	F	P		DRLG CEMENT, F/E & OPEN HOLE TO 2855'
	23:30 - 0:00	0.50	DRLPRO	02	D	P		DRLG F/ 2855 TO 2922', 67' @ 134' PH, WOB 16, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 1400-1150, DIFF 250-400, TOR ON/OFF 2-0, 100% ROT, CIRC RESERVE PIT W/ GEL & POLY SWEEPS
12/12/2010	0:00 - 15:30	15.50	DRLPRO	02	B	P		DRLG F/ 2922 TO 4635', 1713' @ 110.5' PH, WOB 18, MW 8.4, VIS 26, CIRC RESERVE W/ GEL & POLY SWEEPS, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 1550-1250, DIFF 250-400, TOR ON/OFF 6-4 K, BOP DRILL 75 SEC, F/T ANN & HCR SLIDE 62' IN 1.84 HRS=33.6' PH ROT 1651' IN 13.66 HRS=120.8' PH
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	16:00 - 0:00	8.00	DRLPRO	02	B	P		DRLG F/ 4635 TO 5645', 1010' @ 126.3' PH, WOB 18, MW 8.4, VIS 27, CIRC RESERVE W/ GEL & POLY SWEEPS, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 1900-1700, DIFF 200-400, TOR ON/OFF 7-5 K, 100% ROT
12/13/2010	0:00 - 16:00	16.00	DRLPRO	02	B	P		DRLG F/ 5645 TO 7101', 1456' @ 91' PH, WOB 18, MW 8.4, VIS 27, CIRC RESERVE W/ GEL & POLY SWEEPS, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 1900-1650, DIFF 200-400, TOR ON/OFF 7-4, SLIDES 62' IN 2.66 HRS=23.3' PH ROT 1394' IN 13.34 HRS=104.5' PH
	16:00 - 16:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	16:30 - 0:00	7.50	DRLPRO	02	B	P		DRLG F/ 7101 TO 7460',359' @ 47.9' PH, WOB 18-20, START MUD UP @ 7150, MW 9.2, VIS 35, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 2100-1800, DIFF 200-400, TOR ON/OFF 7-4 SLIDES 15' IN 1.83 HRS=8.2' PH ROT 344' IN 5.67 HRS= 60.7' PH
12/14/2010	0:00 - 15:30	15.50	DRLPRO	02	B	P		DRLG F/ 7460 TO 8335', 875' @ 56.5' PH, WOB 20, MW 10, VIS 36, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 2300-2100, DIFF 150-250, TOR 7-4 K,
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	16:00 - 0:00	8.00	DRLPRO	02	B	P		DRLG F/ 8335 TO 8870', 455' @ 56.9' PH, WOB 22, MW 10.6, VIS 40, SPM 120, GPM 454, RPM 50, MM 97, PSI ON/OFF 2600-2300, DIFF 200-300, TOR 7-5 K,
12/15/2010	0:00 - 2:00	2.00	DRLPRO	02	B	P		DRLG F/ 8790 TO 8920', 130' @ 65' PH, MW 10.6, VIS 40, WOB 20, SPM 110, GPM 424, RPM 50, MM 86, PSI ON/OFF 2600-2400, DIFF 200-400, TOR ON/OFF 7-5 K
	2:00 - 2:30	0.50	DRLPRO	22	H	X		WORK TIGHT HOLE @ 8920'
	2:30 - 15:30	13.00	DRLPRO	02	B	P		DRLG F/ 8920 TO 9378', 458' @ 35.3' PH, WOB 18, MW 11.6, VIS 40, SPM 110, GPM 424, RPM 50, MM 86, PSI ON/OFF 2600-2400, DIFF 200-400, TOR 7-5 K
	15:30 - 16:00	0.50	DRLPRO	07	A	P		SERVICE RIG

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	16:00 - 20:30	4.50	DRLPRO	02	B	P		DRLG F/ 9378 TO 9520', 142' @ 31.5' PH, WOB 20, SPM 110, GPM 424, RPM 50, MM 86, PSI ON/OFF 2800-2600, DIFF 150-350, TOR ON/OFF 7-5 K
	20:30 - 21:30	1.00	DRLPRO	05	C	P		CIRC & COND HOLE F/ TRIP, MIX PILL
	21:30 - 23:00	1.50	DRLPRO	06	A	P		POOH W/ BIT #1
	23:00 - 0:00	1.00	DRLPRO	22	A	X		WORK TIGHT HOLE @ 5000', BACK REAM 60'
12/16/2010	0:00 - 0:30	0.50	DRLPRO	22	A	X		BACK REAM 60' @ 5000', MIX PILL TO POOH
	0:30 - 7:00	6.50	DRLPRO	06	A	P		POOH L/D MM & BIT #1, P/U BIT #2 & MM, TIH
	7:00 - 7:30	0.50	DRLPRO	03	D	P		WASH & REAM 40' TO BOTTOM 5' FILL
	7:30 - 15:00	7.50	DRLPRO	02	B	P		DRLG F/ 9520' TO 9956', 436' @ 58.1' PH, WOB 18, MW 12, VIS 43, LCM 5%, SPM 120, GPM 454, RPM 50, MM 76, PSI ON/OFF 2650-2500, DIFF 100-250, TOR ON/OFF 7-5 K
	15:00 - 15:30	0.50	DRLPRO	07	A	P		SERVICE RIG, F/T ANN & HCR
	15:30 - 0:00	8.50	DRLPRO	02	B	P		DRLG F/ 9956' TO 10320', 800' @ 50' PH, WOB 20, MW 12.8, VIS 48, LCM 5%, SPM 115, GPM 435, RPM 50, MM 70, PSI ON/OFF 2800-2600, DIFF 100-250, TOR 9-6 K
12/17/2010	0:00 - 4:30	4.50	DRLPRO	02	B	P		DRLG F/ 10320 TO 10372', 52' @ 11.5
	4:30 - 10:30	6.00	DRLPRO	22	G	X		LOST RETURNS, PULL 5 STDS, MIX LCM & BUILD VOLUME
	10:30 - 12:00	1.50	DRLPRO	02	B	P		DRLG F/ 10372 TO 10395', 23' PH, WOB 24, MW 12.7, VIS 48, LCM 20%, SPM 115, GPM 435, RPM 50, MM 87, PSI ON/OFF 2800-2600, DIFF 100-200, TOR 9-3 K
	12:00 - 13:00	1.00	DRLPRO	05	C	P		CIRC & COND MUD F/ TRIP
	13:00 - 22:00	9.00	DRLPRO	06	A	P		POOH W/ BIT #2, P/U BIT #3 TIH, 2 PLUGGED JETS, RUBBER & A ROCK, TRIP WAS CLEAN W/ 5' FILL
	22:00 - 0:00	2.00	DRLPRO	02	B	P		DRLG F/ 10395 TO 10435', 40' @ 20' PH, WOB 18, MW 12.7, VIS 48, LCM 20%, SPM 118, GPM 446, RPM 50, MM 97, PSI ON/OFF 2600-2400, DIFF 150-300, TOR 6-4 K
12/18/2010	0:00 - 13:00	13.00	DRLPRO	02	B	P		DRLG F/ 10435 TO 10718', 283' @ 21.8' PH, WOB 20, MW 12.8, VIS 47, LCM 20%, SPM 115, GPM 435, RPM 50, MM 91, PSI ON/OFF 2600-2400, DIFF 100-250, TOR 8-6 K
	13:00 - 13:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	13:30 - 0:00	10.50	DRLPRO	02	B	P		DRLG F/ 10718 TO 10945', 227' @ 21.6' PH, WOB 24, MW 12.8, VIS 51, LCM 20%, SPM 115, GPM 435, RPM 50, MM 91, PSI ON/OFF 2700-2500, DIFF 100-250, TOR 9-6 K
12/19/2010	0:00 - 12:00	12.00	DRLPRO	02	B	P		DRLG F/ 10,945 TO 11194', 249' @ 20.75' PH, WOB 24, MW 12.9, VIS 49, LCM 20%, SPM 115, GPM 435, RPM 40-50, MM 91, PSI ON/OFF 2800-2600, DIFF 100-250, TOR 10-6 K
	12:00 - 12:30	0.50	DRLPRO	07	A	P		SERVICE RIG
	12:30 - 16:30	4.00	DRLPRO	02	B	P		DRLG F/ 11194 TO 11290',TD WELL 12-19-10 @ 18:30, 96' @ WOB 24, MW 13.1, VIS 50, LCM 20%, SPM 115, GPM 435, RPM 40-50, MM 91, PSI ON/OFF 2900-2600, DIFF 100-250, TOR 10-6 K
	16:30 - 18:00	1.50	DRLPRO	05	C	P		CIRC & COND HOLE FOR WIPER TRIP
	18:00 - 0:00	6.00	DRLPRO	06	E	P		SHORT TRIP TO SHOE
12/20/2010	0:00 - 1:00	1.00	DRLPRO	06	E	P		SHORT TRIP TO SHOE
	1:00 - 3:00	2.00	DRLPRO	05	C	P		CIRC & COND FOR POOH TO LOG
	3:00 - 9:00	6.00	DRLPRO	06	B	P		POOH FOR OPEN HOLE LOGS, L/D DIR TOOLS

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	9:00 - 17:30	8.50	DRLPRO	11	C	P		HPJSM W/ RIG & LOGGING CREWS, R/U & RUN TRIPLE COMBO-OPEN HOLE LOGS TO 11,284', R/D
	17:30 - 19:00	1.50	DRLPRO	06	E	P		P/U ROLLER CONE & BIT SUB, TIH TO SHOE
	19:00 - 20:00	1.00	DRLPRO	09	A	P		CUT & SLIP 120' DRLG LINE
	20:00 - 0:00	4.00	DRLPRO	06	E	P		TIH, WASH 120' TO BOTTOM W/ 5' FILL, 10' FLARE F/ @ 10 MIN
12/21/2010	0:00 - 2:30	2.50	DRLPRO	05	C	P		CIRC & COND HOLE, HPJSM W/ RIG & L/D CREWS, MIX & PUMP PILL
	2:30 - 9:30	7.00	DRLPRO	06	A	P		LDDS
	9:30 - 10:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	10:00 - 10:30	0.50	DRLPRO	14	B	P		PULL WEAR BUSHING
	10:30 - 20:30	10.00	DRLPRO	12	C	P		HPJSM W/ RIG & CASING CREWS, R/U & RUN 265 JTS + 2 MARKER WASATCH @ 5035, MESA @ 8050, CASING TO 11285', R/D
	20:30 - 22:00	1.50	DRLPRO	05	D	P		CIRC & COND HOLE, HPJSM W/ RIG & CEMENTING CREWS
	22:00 - 0:00	2.00	DRLPRO	12	E	P		TEST LINES TO 5000#, PUMP 40 BBLS SPACER, LEAD 655 SKS, 13.2 PPG 1.69 YLD, TAIL 1390 SKS 14.3 1.25 YLD, DROP PLUG & DISPLACE W/ 174 BBLS CLAYTREAT WATER, 155 BBLS INTO DISPLACEMENT LOST RETURNS, 20 BBLS SPACER TO PIT , 2.5 BACK TO TRUCK, PLUG BACK TO 11248', BUMP PLUG W/ 3800PSI 500 OVER FINAL LIFT OF 3300 PSI
12/22/2010	0:00 - 0:30	0.50	DRLPRO	12	B	P		R/D CEMENTERS
	0:30 - 6:00	5.50	DRLPRO	14	A	P		FLUSH STACK, PULL ROT RUBBER,SET SLIP W/ 140 K, N/D & MAKE ROUGH CUT, CLEAN PITS & RELEASE RIG @ 06:00 12/22/10

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 6:00	0.00	DRLPRO					

CONDUCTOR CASING:
Cond. Depth set: 40
Cement sx used: 28

SPUD DATE/TIME: 10/17/2010 0:00

SURFACE HOLE:
Surface From depth: 40
Surface To depth: 2,840
Total SURFACE hours: 36.00
Surface Casing size: 8 5/8
# of casing joints ran: 63
Casing set MD: 2,797.0
sx of cement: LEAD 220, TAIL 425
Cement blend (ppg:) LEAD 11, TAIL 15.8
Cement yield (ft3/sk): LEAD 3.82, TAIL 1.15
# of bbls to surface: 0
Describe cement issues: FULL RETURNS
Describe hole issues: GASSY

PRODUCTION:
Rig Move/Skid start date/time: 12/7/2010 18:00
Rig Move/Skid finish date/time: 12/9/2010 17:00
Total MOVE hours: 47.0
Prod Rig Spud date/time: 12/11/2010 21:30
Rig Release date/time: 12/22/2010 6:00
Total SPUD to RR hours: 248.5
Planned depth MD 11,286
Planned depth TVD 11,286
Actual MD: 11,290
Actual TVD: 11,285
Open Wells $: $1,051,605
AFE $: $1,239,600
Open wells $/ft: $93.03

PRODUCTION HOLE:
Prod. From depth: 2,855
Prod. To depth: 11,290
Total PROD hours: 154
Log Depth: 11284
Float Collar Top Depth: 11248
Production Casing size: 4.5", P-110
# of casing joints ran: 265
Casing set MD: 11,285.0
Stage 1
sx of cement: LEAD 655, TAIL 1390
Cement density (ppg:) LEAD 13.2, TAIL 14.3
Cement yield (ft3/sk): LEAD 1.69, TAIL 1.25
Stage 2
sx of cement:
Cement density (ppg:)
Cement yield (ft3/sk):
Top Out Cmt
sx of cement:
Cement density (ppg:)
Cement yield (ft3/sk):
Est. TOC (Lead & Tail) or 2 Stage :
Describe cement issues:
Describe hole issues:

DIRECTIONAL INFO:
KOP:
Max angle:
Departure:

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: PROPETRO/, PIONEER 54/54
Event: DRILLING	Start Date: 9/30/2010	End Date: 12/22/2010
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								Max dogleg MD:

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 1/24/2011	End Date: 2/7/2011
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/1/2011	7:00 - 7:15	0.25	COMP	48		P		JSA= PICKING UP TUBING
	7:15 - 17:00	9.75	COMP	30		P		RU RIG ND WELLHEAD NU BOPS TALLEY & PU TUBING TO 8200' POOHTO 4000' SDFN.
2/2/2011	7:00 - 7:15	0.25	COMP	48		P		JSA= 27 BELOW KEEPING WARM
	7:15 - 15:00	7.75	COMP	30				0 PSI ON WELL POOH W/ REMAINING TUBING RD FLOOR & TUBING EQUIP ND BOPS NU FRAC VALVES RU FLOOR & TARPS W/ HEATER FILL HOLE W/ RIG PUMP NU TESTER & PRESS TEST AS PER PROC TO 9000# MI RU W/L PREP TO FRAC IN AM
2/3/2011	7:00 - 15:00	8.00	COMP	30		P		STANDBY
2/4/2011	6:00 - 6:15	0.25	COMP	48		P		JSA= FRAC & PERF SAFETY
	6:15 - 19:00	12.75	COMP	30		P		0 PSI ON WELL STAGE #1] PU RIH W/ PERF GUN, PERF MESA VERDE USING 3-3/8" EXPEND, 23 GRAM, 0.36" HOLES 11078'-11080', 4 SPF, 90* PH, 8 HOLES, BRK DWN PERFS @ 6923# , ISIP= 4526# 10958'-10960', 3 SPF, 120* PH, 6 HOLES. 10946'-10948', 3 SPF, 120* PH, 6 HOLES. 10936'-10938', 3 SPF, 120* PH, 6 HOLES. 10930'-10932', 3 SPF, 120* PH, 6 HOLES. (32 HOLES) WHP= 0 ,BREAK DOWN PERF@ 4080# , INJ RT= 51.4 ,INJ PSI 6150# ,ISIP=3670# , FG= .77 , MP= 9094# , MR= 51.5 , AP= 7000# , AR= 51 , FG=.80 , ISIP= 4056# , NPI= 386# , BLS SLICK WTR PUMPED= 4349 , W/ 99262 #30/50 TLC. W/ 32/32 CALC PERFS OPEN 100%. STAGE #2] PU RIH W/ HALLI 10K CBP & PERF GUN, SET CBP @ 10902', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE. 10870'-10872', 4 SPF, 90* PH, 8 HOLES, BRK DWN PERFS @ , ISIP= 10840'-10842', 4 SPF, 90* PH, 8 HOLES 10804'-10806', 4 SPF, 90* PH, 8 HOLES 10779'-10781', 4 SPF, 90* PH, 8 HOLES. (32 HOLES) WHP= 3723# ,BREAK DOWN PERF@5276# , INJ RT= 51.4 ,INJ PSI= 6727# ,ISIP= 4169# , FG= .82 , MP= 8511# , MR= 51.6 , AP= 7100# , AR= 50.7 , FG= .81 , ISIP=4128# , NPI= -41 , BLS SLICK WTR PUMPED= 3556 , W/ 106178 #30/50 TLC. W/ 32 /32 CALC PERFS OPEN 100%. STAGE #3] PU RIH W/ HALLI 8K CBP & PERF GUN, SET CBP @ 10271', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE. 10219'-10221', 3 SPF, 120* PH, 6 HOLES. 10206'-10208', 3 SPF, 120* PH, 6 HOLES. 10180'-10181', 4 SPF, 90* PH, 4 HOLES. 9986'-9988', 3 SPF, 120* PH, 6 HOLES. (22 HOLES) SWIFN

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010
Project: UTAH-UINTAH	Site: NBU 921-16P	Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 1/24/2011	End Date: 2/7/2011
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/5/2011	7:00 - 7:15	0.25	COMP	48		P		JSA=

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010	
Project: UTAH-UINTAH	Site: NBU 921-16P		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 1/24/2011		End Date: 2/7/2011
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	30		P		STAGE #3] PERFS SHOT PREV NIGHT WHP= 2300 ,BREAK DOWN PERF@ 3717# , INJ RT= 51.4 ,INJ PSI = 6727# ,ISIP= 2879# , FG=.72 , MP= 6542# , MR= 53.7 , AP= 6200# , AR= 43 , FG= .74 , ISIP= 3080# , NPI= 201# , BLS SLICK WTR PUMPED= 704 , W/ 22593 #30/50 MESH W/ 5000# RESIN COAT IN TAIL. 14/22 CALC PERFS OPEN 64% STAGE #4] PU RIH W/ HALLI 8K CBP & PERF GUN, SET CBP @ 9806', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE. 9754'-9756', 4 SPF, 90* PH, 8 HOLES 9696'-9697', 4 SPF, 90* PH, 4 HOLES 9656'-9657', 4 SPF, 90* PH, 4 HOLES. 9600'-9602', 3 SPF, 120* PH, 6 HOLES. (22 HOLES) WHP= 1380# ,BREAK DOWN PERF@ 3622# , INJ RT= 38 ,INJ PSI 6245# ,ISIP= 2879# , FG= .72 , MP=6608# , MR= 51.6 , AP= 6150# , AR= 44 , FG= .78 , ISIP= 3360# , NPI= 83 , BLS SLICK WTR PUMPED= 686 , W/ 22737 #30/50 MESH. W/ 18 /22 CALC PERFS OPEN 82% STAGE #5] PU RIH W/ HALLI 8K CBP & PERF GUN, SET CBP @ 9507', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE 9456'-9457', 4 SPF, 90* PH, 4 HOLES. 9440'-9441', 4 SPF, 90* PH, 4 HOLES. 9370'-9371', 4 SPF, 90* PH, 4 HOLES. 9336'-9337', 3 SPF, 120* PH, 3 HOLES. 9324'-9325', 3 SPF, 120* PH, 3 HOLES. 9238'-9239', 4 SPF, 90* PH, 4 HOLES. (22 HOLES) WHP= 1620# ,BREAK DOWN PERF@3943# , INJ RT= 37.9 ,INJ PSI = 6435# ,ISIP= 2468# , FG= .70 , MP= 6715# , MR= 50.9 , AP= 6000# , AR= 45.5 , FG=.73 , ISIP= 2820# , NPI= 352# , BLS SLICK WTR PUMPED= 993 , W/ 37403 #30/50 MESH. W/5000# RESIN IN TAIL 14/22 CALC PERFS OPEN 64% STAGE #6] PU RIH W/ HALLI 8K CBP & PERF GUN, SET CBP @ 8742', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE. 8690'-8692', 4 SPF, 90* PH, 8 HOLES. 8600'-8602', 4 SPF, 90* PH, 8 HOLES. 8562'-8564', 4 SPF, 90* PH, 8 HOLES. (24 HOLES) WHP= 904# ,BREAK DOWN PERF@ 2659# , INJ RT= 53.4 ,INJ PSI= 5985# ,ISIP=2307# , FG= .70 , MP=6608 , MR= 51.4 , AP= 5350# , AR=49 , FG=.76 , ISIP= 2837# , NPI= 530# , BLS SLICK WTR PUMPED= 671 , W/ 23295 #30/50 MESH. W/ 5000# RESIN 18/24 CALC PERFS OPEN 75% STAGE #7] PU RIH W/ HALLI 8K CBP & PERF GUN, SET CBP @ 8446', PERF MESA VERDE USING 3-3/8" EXP, 23 GRAM, 0.36" HOLE 8394'-8396', 3 SPF, 120* PH, 6 HOLES. 8376'-8378', 3 SPF, 120* PH, 6 HOLES. 8348'-8350', 3 SPF, 120* PH, 6 HOLES. 8302'-8304', 3 SPF, 120* PH, 6 HOLES. (24 HOLES) WHP=1020# ,BREAK DOWN PERF@ 3146# , INJ

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010	
Project: UTAH-UINTAH	Site: NBU 921-16P		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 1/24/2011		End Date: 2/7/2011
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								RT= 50.8 ,INJ PSI= 5139# ,ISIP=2083# , FG= .68 , MP= 6441# , MR= 51.7 , AP= 3850# , AR= 51.5 , FG= .72 , ISIP= 2403 , NPI= 321# , BLS SLICK WTR PUMPED= 1599 , W/ 64634 #30/50 MESH. W/ 5000# RESIN IN TAIL 24/24 CALC PERFS OPEN 100% PU SETTING TOOL & HALLI 8K CBP RIH SET @ 8230' FOR KILL PLUG RD FRAC EQUIP & W/L EQUIP SWIFW TOTAL FLUID PUMPED=12,558 BBLS TOTAL SAND = 377101 SCALE INHIB= 1266 GAL BIOCIDE= 230
2/7/2011	7:00 - 7:15	0.25	COMP	48		P		JSA= WELL CONTROL

US ROCKIES REGION

Operation Summary Report

Well: NBU 921-16P	Spud Conductor: 10/12/2010	Spud Date: 10/17/2010	
Project: UTAH-UINTAH	Site: NBU 921-16P		Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 1/24/2011		End Date: 2/7/2011
Active Datum: RKB @4,829.00ft (above Mean Sea Level)	UWI: SE/SE/0/9/S/21/E/16/0/0/26/PM/S/962.00/E/0/610.00/0/0		

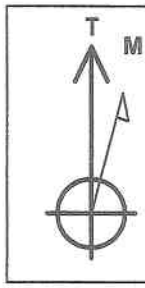
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 19:00	11.75	COMP	30		P		0 PSI ON WELL ND FRAC VALVES NU BOPS RU FLOOR & TUBING EQUIP PU 3-7/8" BIT POBC & 1.87XN NPL TIH TAG KILL PLUG @ 8230' PLUG #1] DRILL THRU HALLI 8K CBP @ 8230' IN 10 MIN W/ 100 # INCREASE PLUG #2] CONTINUE TO RIH TAG SAND @ 8400' (46' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8446' IN 12 MIN W/0 INCREASE. PLUG #3] CONTINUE TO RIH TAG SAND @ 8692' (50' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8742' IN 9 MIN W/200# INCREASE PLUG #4] CONTINUE TO RIH TAG SAND @ 9457' (50 FILL) C/O & DRILL THRU HALLI 8K CBP @ 9507' IN 12 MIN W150# INCREASE. (450# ON WELL) PLUG #5] CONTINUE TO RIH TAG SAND @ 9761' (45' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9806' IN 14 MIN W/200# INCREASE PLUG #6] CONTINUE TO RIH TAG SAND @ 10852' (50 FILL) C/O & DRILL THRU HALLI 8K CBP @ 10271' IN MIN W/150# INCREASE. PLUG #7] CONTINUE TO RIH TAG SAND @ (FILL) C/O & DRILL THRU HALLI 8K CBP @ 10902' IN MIN W/ INCREASE CONTINUE TO RIH TAG SAND @ C/O TO PBTD @ 11240' CIRC CLEAN POOH LD 40 JNTS LAND TUBING ON HANGER W/ 315 JNTS EOT @ 9969.43' RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD DROP BALL PUMP OFF BIT @3300 PSI SWI 30 MIN TO ALLOW BALL TO FALL TURN WELL OVER TO FBC @ 18:30 TUBING BROUGHT= 364 JNTS USED IN WELL= 315 ON FLOAT = 49 TUBING DETAIL KB= 19.00 HANGER= 1.00 315 JNTS 2-3/8" L-80= 9947.23 POBS= 2.20 EOT= 9969.43
2/11/2011	7:00 -			50				WELL IP'D ON 2/11/11 - 2746 MCFD, 0 BOPD, 271 BWPD, CP 3000#, FTP 2300#, CK 18/64", LP 123#, 24 HRS

Scientific Drilling
Rocky Mountain Operations

Site: NBU 921-16P
Well: NBU 921-16P
Wellbore: OH
Design: OH

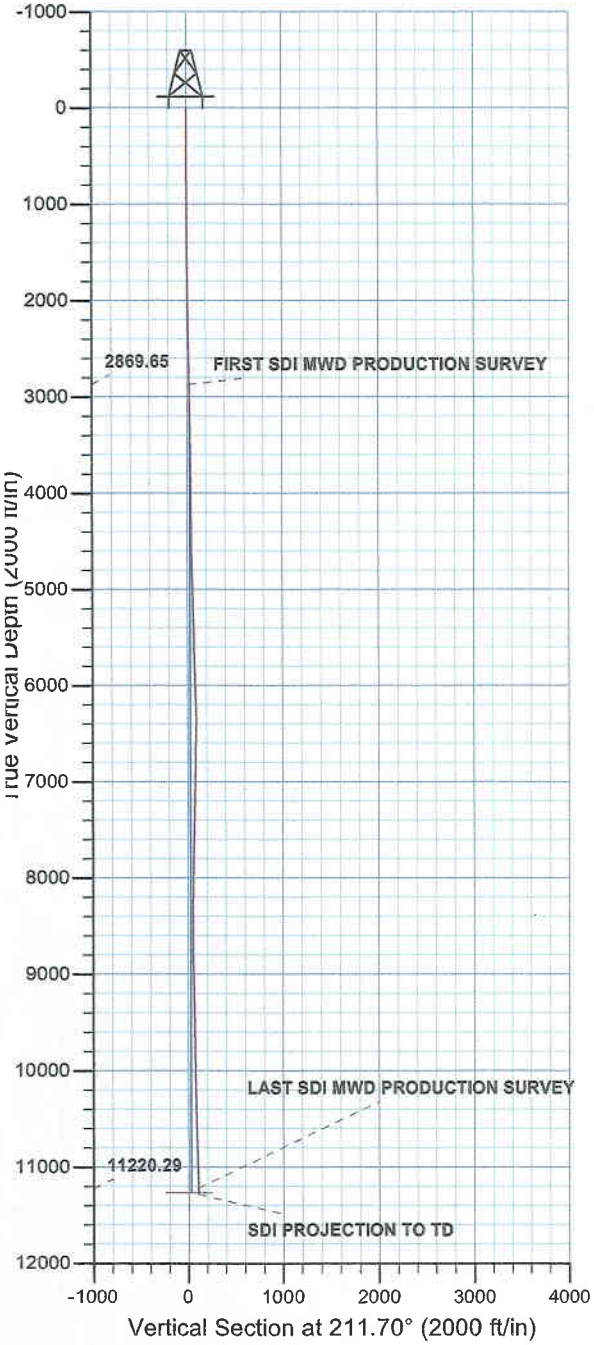
Anadarko Petroleum Corporation

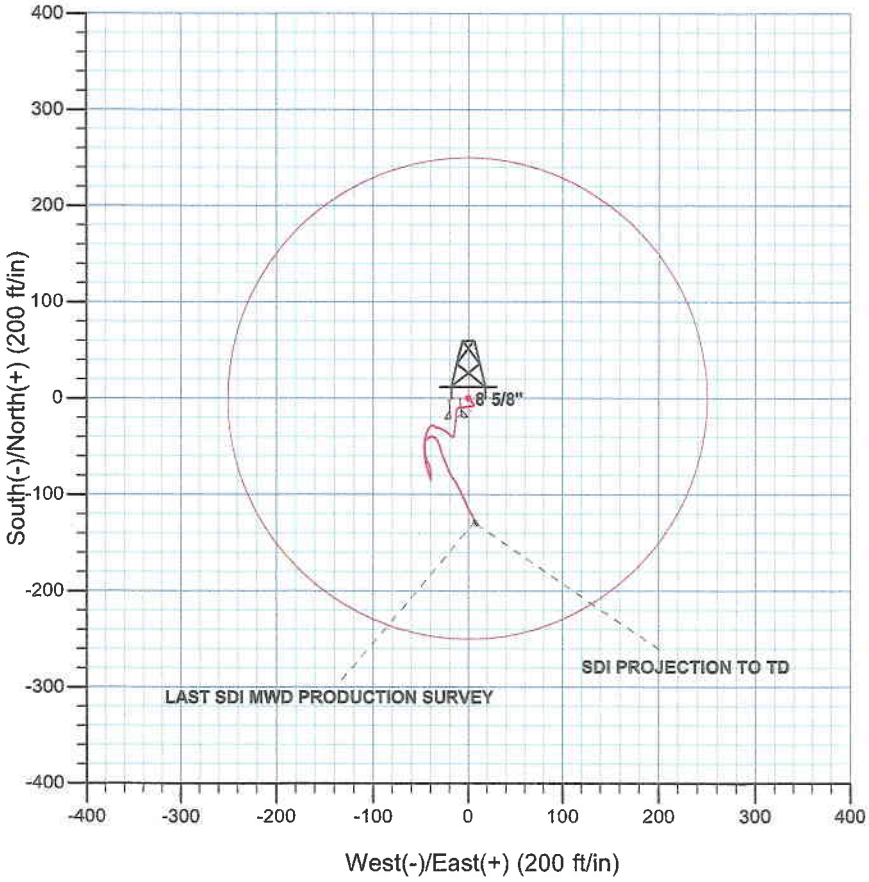
WELL DETAILS: NBU 921-16P					
GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14540409.32	2046663.15	40° 1' 49.300 N	109° 32' 55.702 W



Azimuths to True North
Magnetic North: 11.18°

Magnetic Field
Strength: 52400.5snT
Dip Angle: 65.90°
Date: 11/05/2010
Model: IGRF2010





PROJECT DETAILS: Uintah County, UT UTM12	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SEC 16 T9S R21E
System Datum:	Mean Sea Level

Design: OH (NBU 921-16P/OH)

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 921-16P
NBU 921-16P

OH

Design: OH

Standard Survey Report

21 December, 2010

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Project	Uintah County, UT UTM12		
Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 921-16P, SEC 16 T9S R21E				
Site Position:		**Northing:**	14,540,409.31 usft	**Latitude:**	40° 1' 49.300 N
From:	Lat/Long	**Easting:**	2,046,663.14 usft	**Longitude:**	109° 32' 55.702 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.93 °

Well	NBU 921-16P, 962' FSL, 491' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	14,540,409.31 usft	**Latitude:**	40° 1' 49.300 N
	+E/-W	0.00 ft	**Easting:**	2,046,663.14 usft	**Longitude:**	109° 32' 55.702 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,810.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/05/2010	11.18	65.90	52,400

Design	OH					
Audit Notes:						
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**		0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**		
	0.00	0.00	0.00	211.70		

Survey Program **Date** 12/21/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
15.00	2,815.00	Survey #1-SINGLE SHOT (OH)	CB-MAG-SS	Camera based mag single shot
2,870.00	11,290.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
515.00	1.00	127.30	514.97	-2.64	3.47	0.43	0.20	0.20	0.00
1,015.00	0.50	200.60	1,014.94	-7.33	6.17	2.99	0.20	-0.10	14.66
2,015.00	1.20	283.00	2,014.85	-9.06	-5.56	10.63	0.12	0.07	8.24
2,815.00	1.90	175.10	2,814.67	-20.39	-12.60	23.97	0.32	0.09	-13.49
2,870.00	1.22	189.65	2,869.65	-21.88	-12.62	25.24	1.42	-1.24	26.45
FIRST SDI MWD PRODUCTION SURVEY									
2,965.00	1.10	198.62	2,964.63	-23.74	-13.08	27.07	0.23	-0.13	9.44
3,060.00	1.10	179.62	3,059.62	-25.51	-13.36	28.73	0.38	0.00	-20.00

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,155.00	1.04	181.02	3,154.60	-27.29	-13.37	30.24	0.07	-0.06	1.47
3,250.00	1.38	193.64	3,249.58	-29.26	-13.66	32.07	0.45	0.36	13.28
3,344.00	1.60	190.46	3,343.55	-31.65	-14.16	34.37	0.25	0.23	-3.38
3,439.00	1.58	181.10	3,438.51	-34.26	-14.43	36.73	0.27	-0.02	-9.85
3,534.00	1.45	187.80	3,533.48	-36.77	-14.61	38.96	0.23	-0.14	7.05
3,629.00	1.68	191.44	3,628.44	-39.32	-15.05	41.36	0.26	0.24	3.83
3,724.00	1.09	289.45	3,723.42	-40.39	-16.18	42.86	2.24	-0.62	103.17
3,819.00	3.05	317.20	3,818.36	-38.23	-18.75	42.38	2.26	2.06	29.21
3,913.00	2.80	306.15	3,912.24	-35.04	-22.31	41.53	0.65	-0.27	-11.76
4,008.00	2.37	299.32	4,007.14	-32.71	-25.89	41.44	0.56	-0.45	-7.19
4,103.00	2.20	290.69	4,102.06	-31.10	-29.31	41.87	0.40	-0.18	-9.08
4,198.00	2.03	271.56	4,197.00	-30.41	-32.70	43.06	0.76	-0.18	-20.14
4,293.00	1.36	315.08	4,291.96	-29.57	-35.18	43.64	1.48	-0.71	45.81
4,388.00	1.05	296.32	4,386.94	-28.39	-36.75	43.46	0.52	-0.33	-19.75
4,482.00	0.84	260.18	4,480.93	-28.12	-38.20	44.00	0.66	-0.22	-38.45
4,577.00	1.01	228.23	4,575.92	-28.80	-39.51	45.27	0.56	0.18	-33.63
4,672.00	1.28	216.79	4,670.90	-30.20	-40.77	47.13	0.37	0.28	-12.04
4,767.00	1.38	213.80	4,765.87	-32.01	-42.05	49.33	0.13	0.11	-3.15
4,862.00	1.50	203.14	4,860.84	-34.10	-43.17	51.70	0.31	0.13	-11.22
4,957.00	1.68	198.58	4,955.81	-36.56	-44.10	54.28	0.23	0.19	-4.80
5,052.00	1.64	198.41	5,050.77	-39.17	-44.98	56.96	0.04	-0.04	-0.18
5,147.00	1.53	191.16	5,145.73	-41.71	-45.65	59.47	0.24	-0.12	-7.63
5,241.00	1.48	187.43	5,239.70	-44.14	-46.05	61.76	0.12	-0.05	-3.97
5,336.00	1.79	184.27	5,334.66	-46.84	-46.32	64.19	0.34	0.33	-3.33
5,431.00	1.73	179.85	5,429.61	-49.75	-46.43	66.73	0.16	-0.06	-4.65
5,526.00	1.84	180.62	5,524.57	-52.71	-46.44	69.25	0.12	0.12	0.81
5,621.00	2.04	175.07	5,619.51	-55.92	-46.31	71.91	0.29	0.21	-5.84
5,716.00	2.03	174.07	5,714.45	-59.28	-45.99	74.60	0.04	-0.01	-1.05
5,811.00	2.28	170.21	5,809.39	-62.81	-45.50	77.35	0.30	0.26	-4.06
5,906.00	2.35	167.25	5,904.31	-66.58	-44.74	80.16	0.15	0.07	-3.12
6,001.00	2.49	166.77	5,999.23	-70.48	-43.84	83.01	0.15	0.15	-0.51
6,096.00	2.49	165.52	6,094.14	-74.49	-42.85	85.90	0.06	0.00	-1.32
6,190.00	2.56	160.35	6,188.04	-78.45	-41.64	88.62	0.25	0.07	-5.50
6,285.00	2.88	161.42	6,282.94	-82.71	-40.16	91.47	0.34	0.34	1.13
6,380.00	0.14	19.22	6,377.90	-84.86	-39.37	92.88	3.15	-2.88	-149.68
6,475.00	2.28	355.42	6,472.87	-82.87	-39.48	91.25	2.27	2.25	-25.05
6,570.00	2.09	358.30	6,567.80	-79.25	-39.68	88.28	0.23	-0.20	3.03
6,664.00	1.68	357.59	6,661.75	-76.16	-39.79	85.71	0.44	-0.44	-0.76
6,759.00	1.21	357.74	6,756.72	-73.77	-39.89	83.72	0.49	-0.49	0.16
6,853.00	0.94	347.09	6,850.70	-72.02	-40.10	82.35	0.36	-0.29	-11.33
6,948.00	1.92	333.91	6,945.67	-69.83	-40.97	80.95	1.08	1.03	-13.87
7,043.00	1.45	327.60	7,040.63	-67.39	-42.32	79.57	0.53	-0.49	-6.64
7,137.00	1.22	331.06	7,134.61	-65.51	-43.44	78.56	0.26	-0.24	3.68

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,232.00	2.60	349.97	7,229.55	-62.50	-44.30	76.46	1.58	1.45	19.91
7,327.00	2.32	349.89	7,324.47	-58.49	-45.02	73.42	0.29	-0.29	-0.08
7,421.00	1.97	353.78	7,418.40	-55.01	-45.52	70.72	0.40	-0.37	4.14
7,516.00	1.51	356.68	7,513.36	-52.14	-45.77	68.41	0.49	-0.48	3.05
7,611.00	1.22	351.85	7,608.33	-49.89	-45.99	66.61	0.33	-0.31	-5.08
7,707.00	1.26	5.66	7,704.31	-47.82	-46.03	64.88	0.31	0.04	14.39
7,801.00	1.07	17.46	7,798.29	-45.96	-45.67	63.10	0.32	-0.20	12.55
7,896.00	0.81	31.46	7,893.27	-44.54	-45.05	61.57	0.36	-0.27	14.74
7,991.00	1.17	40.06	7,988.26	-43.22	-44.07	59.94	0.41	0.38	9.05
8,087.00	0.99	41.09	8,084.24	-41.85	-42.90	58.15	0.19	-0.19	1.07
8,182.00	0.79	48.99	8,179.23	-40.80	-41.86	56.71	0.25	-0.21	8.32
8,277.00	0.72	67.99	8,274.22	-40.15	-40.82	55.61	0.27	-0.07	20.00
8,372.00	0.88	69.98	8,369.21	-39.67	-39.58	54.55	0.17	0.17	2.09
8,467.00	0.87	99.76	8,464.20	-39.55	-38.18	53.71	0.47	-0.01	31.35
8,562.00	0.97	119.19	8,559.19	-40.06	-36.77	53.41	0.34	0.11	20.45
8,656.00	1.23	124.20	8,653.17	-41.02	-35.24	53.41	0.29	0.28	5.33
8,751.00	1.31	143.81	8,748.15	-42.46	-33.76	53.87	0.46	0.08	20.64
8,845.00	1.55	150.85	8,842.12	-44.44	-32.50	54.89	0.32	0.26	7.49
8,941.00	1.94	157.67	8,938.08	-47.08	-31.25	56.48	0.46	0.41	7.10
9,036.00	2.06	158.87	9,033.02	-50.16	-30.03	58.45	0.13	0.13	1.26
9,131.00	2.27	159.50	9,127.95	-53.51	-28.75	60.64	0.22	0.22	0.66
9,228.00	2.47	164.92	9,224.87	-57.33	-27.53	63.25	0.31	0.21	5.59
9,323.00	2.36	159.81	9,319.78	-61.14	-26.33	65.86	0.25	-0.12	-5.38
9,416.00	2.04	161.02	9,412.72	-64.51	-25.13	68.09	0.35	-0.34	1.30
9,511.00	1.89	152.23	9,507.66	-67.49	-23.85	69.95	0.35	-0.16	-9.25
9,606.00	2.54	155.02	9,602.59	-70.79	-22.23	71.91	0.69	0.68	2.94
9,702.00	2.45	153.85	9,698.50	-74.56	-20.43	74.17	0.11	-0.09	-1.22
9,797.00	1.77	152.43	9,793.43	-77.68	-18.85	76.00	0.72	-0.72	-1.49
9,892.00	1.72	156.32	9,888.39	-80.29	-17.60	77.55	0.14	-0.05	4.09
9,987.00	1.52	146.33	9,983.35	-82.64	-16.33	78.89	0.36	-0.21	-10.52
10,082.00	1.48	135.23	10,078.32	-84.56	-14.77	79.70	0.31	-0.04	-11.68
10,177.00	2.18	142.04	10,173.27	-86.86	-12.79	80.62	0.77	0.74	7.17
10,273.00	2.39	152.63	10,269.19	-90.07	-10.75	82.28	0.49	0.22	11.03
10,368.00	2.66	156.31	10,364.10	-93.85	-8.95	84.55	0.33	0.28	3.87
10,463.00	2.69	155.42	10,459.00	-97.90	-7.14	87.04	0.05	0.03	-0.94
10,559.00	2.50	154.28	10,554.90	-101.83	-5.29	89.42	0.21	-0.20	-1.19
10,654.00	2.10	158.56	10,649.82	-105.32	-3.76	91.58	0.46	-0.42	4.51
10,749.00	2.54	155.62	10,744.74	-108.86	-2.25	93.80	0.48	0.46	-3.09
10,844.00	2.41	152.97	10,839.66	-112.55	-0.48	96.01	0.18	-0.14	-2.79
10,940.00	2.32	155.41	10,935.57	-116.12	1.25	98.13	0.14	-0.09	2.54
11,035.00	2.40	147.50	11,030.49	-119.54	3.12	100.07	0.35	0.08	-8.33
11,130.00	2.71	153.33	11,125.40	-123.23	5.20	102.11	0.43	0.33	6.14
11,225.00	2.87	150.86	11,220.29	-127.31	7.36	104.44	0.21	0.17	-2.60

LAST SDI MWD PRODUCTION SURVEY

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,290.00	2.87	150.86	11,285.21	-130.15	8.95	106.03	0.00	0.00	0.00
SDI PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,870.00	2,869.65	-21.88	-12.62	FIRST SDI MWD PRODUCTION SURVEY
11,225.00	11,220.29	-127.31	7.36	LAST SDI MWD PRODUCTION SURVEY
11,290.00	11,285.21	-130.15	8.95	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 921-16P
NBU 921-16P

OH

Design: OH

Survey Report - Geographic

21 December, 2010

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Project	Uintah County, UT UTM12		
Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 921-16P, SEC 16 T9S R21E				
Site Position:		**Northing:**	14,540,409.31 usft	**Latitude:**	40° 1' 49.300 N
From:	Lat/Long	**Easting:**	2,046,663.14 usft	**Longitude:**	109° 32' 55.702 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.93 °

Well	NBU 921-16P, 962' FSL, 491' FEL					
Well Position	**+N/-S**	0.00 ft	**Northing:**	14,540,409.31 usft	**Latitude:**	40° 1' 49.300 N
	+E/-W	0.00 ft	**Easting:**	2,046,663.14 usft	**Longitude:**	109° 32' 55.702 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,810.00 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/05/2010	11.18	65.90	52,400

Design	OH					
Audit Notes:						
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**		0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**		
	0.00	0.00	0.00	211.70		

Survey Program **Date** 12/21/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
15.00	2,815.00	Survey #1-SINGLE SHOT (OH)	CB-MAG-SS	Camera based mag single shot
2,870.00	11,290.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,540,409.31	2,046,663.14	40° 1' 49.300 N	109° 32' 55.702 W
15.00	0.00	0.00	15.00	0.00	0.00	14,540,409.31	2,046,663.14	40° 1' 49.300 N	109° 32' 55.702 W
515.00	1.00	127.30	514.97	-2.64	3.47	14,540,406.73	2,046,666.65	40° 1' 49.273 N	109° 32' 55.657 W
1,015.00	0.50	200.60	1,014.94	-7.33	6.17	14,540,402.08	2,046,669.43	40° 1' 49.227 N	109° 32' 55.622 W
2,015.00	1.20	283.00	2,014.85	-9.06	-5.56	14,540,400.16	2,046,657.72	40° 1' 49.210 N	109° 32' 55.773 W
2,815.00	1.90	175.10	2,814.67	-20.39	-12.60	14,540,388.72	2,046,650.88	40° 1' 49.098 N	109° 32' 55.864 W
2,870.00	1.22	189.65	2,869.65	-21.88	-12.62	14,540,387.23	2,046,650.88	40° 1' 49.083 N	109° 32' 55.864 W
FIRST SDI MWD PRODUCTION SURVEY									
2,965.00	1.10	198.62	2,964.63	-23.74	-13.08	14,540,385.37	2,046,650.45	40° 1' 49.065 N	109° 32' 55.870 W
3,060.00	1.10	179.62	3,059.62	-25.51	-13.36	14,540,383.59	2,046,650.20	40° 1' 49.047 N	109° 32' 55.873 W
3,155.00	1.04	181.02	3,154.60	-27.29	-13.37	14,540,381.81	2,046,650.22	40° 1' 49.030 N	109° 32' 55.874 W

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,250.00	1.38	193.64	3,249.58	-29.26	-13.66	14,540,379.83	2,046,649.96	40° 1' 49.010 N	109° 32' 55.877 W
3,344.00	1.60	190.46	3,343.55	-31.65	-14.16	14,540,377.43	2,046,649.50	40° 1' 48.987 N	109° 32' 55.884 W
3,439.00	1.58	181.10	3,438.51	-34.26	-14.43	14,540,374.82	2,046,649.27	40° 1' 48.961 N	109° 32' 55.887 W
3,534.00	1.45	187.80	3,533.48	-36.77	-14.61	14,540,372.31	2,046,649.13	40° 1' 48.936 N	109° 32' 55.890 W
3,629.00	1.68	191.44	3,628.44	-39.32	-15.05	14,540,369.75	2,046,648.73	40° 1' 48.911 N	109° 32' 55.895 W
3,724.00	1.09	289.45	3,723.42	-40.39	-16.18	14,540,368.67	2,046,647.62	40° 1' 48.900 N	109° 32' 55.910 W
3,819.00	3.05	317.20	3,818.36	-38.23	-18.75	14,540,370.78	2,046,645.01	40° 1' 48.922 N	109° 32' 55.943 W
3,913.00	2.80	306.15	3,912.24	-35.04	-22.31	14,540,373.91	2,046,641.41	40° 1' 48.953 N	109° 32' 55.988 W
4,008.00	2.37	299.32	4,007.14	-32.71	-25.89	14,540,376.19	2,046,637.79	40° 1' 48.976 N	109° 32' 56.035 W
4,103.00	2.20	290.69	4,102.06	-31.10	-29.31	14,540,377.74	2,046,634.34	40° 1' 48.992 N	109° 32' 56.078 W
4,198.00	2.03	271.56	4,197.00	-30.41	-32.70	14,540,378.37	2,046,630.94	40° 1' 48.999 N	109° 32' 56.122 W
4,293.00	1.36	315.08	4,291.96	-29.57	-35.18	14,540,379.17	2,046,628.45	40° 1' 49.007 N	109° 32' 56.154 W
4,388.00	1.05	296.32	4,386.94	-28.39	-36.75	14,540,380.33	2,046,626.86	40° 1' 49.019 N	109° 32' 56.174 W
4,482.00	0.84	260.18	4,480.93	-28.12	-38.20	14,540,380.57	2,046,625.40	40° 1' 49.022 N	109° 32' 56.193 W
4,577.00	1.01	228.23	4,575.92	-28.80	-39.51	14,540,379.88	2,046,624.10	40° 1' 49.015 N	109° 32' 56.210 W
4,672.00	1.28	216.79	4,670.90	-30.20	-40.77	14,540,378.45	2,046,622.86	40° 1' 49.001 N	109° 32' 56.226 W
4,767.00	1.38	213.80	4,765.87	-32.01	-42.05	14,540,376.63	2,046,621.62	40° 1' 48.983 N	109° 32' 56.242 W
4,862.00	1.50	203.14	4,860.84	-34.10	-43.17	14,540,374.51	2,046,620.53	40° 1' 48.963 N	109° 32' 56.257 W
4,957.00	1.68	198.58	4,955.81	-36.56	-44.10	14,540,372.04	2,046,619.64	40° 1' 48.938 N	109° 32' 56.269 W
5,052.00	1.64	198.41	5,050.77	-39.17	-44.98	14,540,369.41	2,046,618.81	40° 1' 48.912 N	109° 32' 56.280 W
5,147.00	1.53	191.16	5,145.73	-41.71	-45.65	14,540,366.87	2,046,618.18	40° 1' 48.887 N	109° 32' 56.289 W
5,241.00	1.48	187.43	5,239.70	-44.14	-46.05	14,540,364.43	2,046,617.82	40° 1' 48.863 N	109° 32' 56.294 W
5,336.00	1.79	184.27	5,334.66	-46.84	-46.32	14,540,361.73	2,046,617.59	40° 1' 48.837 N	109° 32' 56.297 W
5,431.00	1.73	179.85	5,429.61	-49.75	-46.43	14,540,358.81	2,046,617.53	40° 1' 48.808 N	109° 32' 56.299 W
5,526.00	1.84	180.62	5,524.57	-52.71	-46.44	14,540,355.85	2,046,617.57	40° 1' 48.779 N	109° 32' 56.299 W
5,621.00	2.04	175.07	5,619.51	-55.92	-46.31	14,540,352.65	2,046,617.75	40° 1' 48.747 N	109° 32' 56.297 W
5,716.00	2.03	174.07	5,714.45	-59.28	-45.99	14,540,349.29	2,046,618.12	40° 1' 48.714 N	109° 32' 56.293 W
5,811.00	2.28	170.21	5,809.39	-62.81	-45.50	14,540,345.77	2,046,618.67	40° 1' 48.679 N	109° 32' 56.287 W
5,906.00	2.35	167.25	5,904.31	-66.58	-44.74	14,540,342.02	2,046,619.49	40° 1' 48.642 N	109° 32' 56.277 W
6,001.00	2.49	166.77	5,999.23	-70.48	-43.84	14,540,338.12	2,046,620.45	40° 1' 48.603 N	109° 32' 56.265 W
6,096.00	2.49	165.52	6,094.14	-74.49	-42.85	14,540,334.13	2,046,621.51	40° 1' 48.563 N	109° 32' 56.253 W
6,190.00	2.56	160.35	6,188.04	-78.45	-41.64	14,540,330.20	2,046,622.79	40° 1' 48.524 N	109° 32' 56.237 W
6,285.00	2.88	161.42	6,282.94	-82.71	-40.16	14,540,325.96	2,046,624.33	40° 1' 48.482 N	109° 32' 56.218 W
6,380.00	0.14	19.22	6,377.90	-84.86	-39.37	14,540,323.82	2,046,625.16	40° 1' 48.461 N	109° 32' 56.208 W
6,475.00	2.28	355.42	6,472.87	-82.87	-39.48	14,540,325.82	2,046,625.02	40° 1' 48.481 N	109° 32' 56.209 W
6,570.00	2.09	358.30	6,567.80	-79.25	-39.68	14,540,329.43	2,046,624.76	40° 1' 48.516 N	109° 32' 56.212 W
6,664.00	1.68	357.59	6,661.75	-76.16	-39.79	14,540,332.51	2,046,624.60	40° 1' 48.547 N	109° 32' 56.213 W
6,759.00	1.21	357.74	6,756.72	-73.77	-39.89	14,540,334.91	2,046,624.46	40° 1' 48.570 N	109° 32' 56.214 W
6,853.00	0.94	347.09	6,850.70	-72.02	-40.10	14,540,336.65	2,046,624.22	40° 1' 48.588 N	109° 32' 56.217 W
6,948.00	1.92	333.91	6,945.67	-69.83	-40.97	14,540,338.82	2,046,623.31	40° 1' 48.609 N	109° 32' 56.228 W
7,043.00	1.45	327.60	7,040.63	-67.39	-42.32	14,540,341.24	2,046,621.93	40° 1' 48.633 N	109° 32' 56.246 W
7,137.00	1.22	331.06	7,134.61	-65.51	-43.44	14,540,343.10	2,046,620.78	40° 1' 48.652 N	109° 32' 56.260 W
7,232.00	2.60	349.97	7,229.55	-62.50	-44.30	14,540,346.10	2,046,619.86	40° 1' 48.682 N	109° 32' 56.271 W
7,327.00	2.32	349.89	7,324.47	-58.49	-45.02	14,540,350.10	2,046,619.08	40° 1' 48.721 N	109° 32' 56.280 W
7,421.00	1.97	353.78	7,418.40	-55.01	-45.52	14,540,353.57	2,046,618.52	40° 1' 48.756 N	109° 32' 56.287 W
7,516.00	1.51	356.68	7,513.36	-52.14	-45.77	14,540,356.44	2,046,618.22	40° 1' 48.784 N	109° 32' 56.290 W
7,611.00	1.22	351.85	7,608.33	-49.89	-45.99	14,540,358.68	2,046,617.97	40° 1' 48.807 N	109° 32' 56.293 W
7,707.00	1.26	5.66	7,704.31	-47.82	-46.03	14,540,360.75	2,046,617.90	40° 1' 48.827 N	109° 32' 56.293 W
7,801.00	1.07	17.46	7,798.29	-45.96	-45.67	14,540,362.62	2,046,618.23	40° 1' 48.845 N	109° 32' 56.289 W
7,896.00	0.81	31.46	7,893.27	-44.54	-45.05	14,540,364.05	2,046,618.82	40° 1' 48.859 N	109° 32' 56.281 W
7,991.00	1.17	40.06	7,988.26	-43.22	-44.07	14,540,365.38	2,046,619.78	40° 1' 48.872 N	109° 32' 56.268 W
8,087.00	0.99	41.09	8,084.24	-41.85	-42.90	14,540,366.77	2,046,620.93	40° 1' 48.886 N	109° 32' 56.253 W
8,182.00	0.79	48.99	8,179.23	-40.80	-41.86	14,540,367.84	2,046,621.95	40° 1' 48.896 N	109° 32' 56.240 W
8,277.00	0.72	67.99	8,274.22	-40.15	-40.82	14,540,368.51	2,046,622.98	40° 1' 48.903 N	109° 32' 56.226 W
8,372.00	0.88	69.98	8,369.21	-39.67	-39.58	14,540,369.00	2,046,624.21	40° 1' 48.907 N	109° 32' 56.210 W

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Site NBU 921-16P
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Site:	NBU 921-16P	**MD Reference:**	GL 4810 & KB 19' @ 4829.00ft (PIONEER 54)
Well:	NBU 921-16P	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM5000-RobertS-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,467.00	0.87	99.76	8,464.20	-39.55	-38.18	14,540,369.15	2,046,625.61	40° 1' 48.909 N	109° 32' 56.193 W
8,562.00	0.97	119.19	8,559.19	-40.06	-36.77	14,540,368.66	2,046,627.03	40° 1' 48.904 N	109° 32' 56.174 W
8,656.00	1.23	124.20	8,653.17	-41.02	-35.24	14,540,367.73	2,046,628.57	40° 1' 48.894 N	109° 32' 56.155 W
8,751.00	1.31	143.81	8,748.15	-42.46	-33.76	14,540,366.30	2,046,630.08	40° 1' 48.880 N	109° 32' 56.136 W
8,845.00	1.55	150.85	8,842.12	-44.44	-32.50	14,540,364.35	2,046,631.37	40° 1' 48.860 N	109° 32' 56.119 W
8,941.00	1.94	157.67	8,938.08	-47.08	-31.25	14,540,361.73	2,046,632.66	40° 1' 48.834 N	109° 32' 56.103 W
9,036.00	2.06	158.87	9,033.02	-50.16	-30.03	14,540,358.67	2,046,633.94	40° 1' 48.804 N	109° 32' 56.088 W
9,131.00	2.27	159.50	9,127.95	-53.51	-28.75	14,540,355.34	2,046,635.27	40° 1' 48.771 N	109° 32' 56.071 W
9,228.00	2.47	164.92	9,224.87	-57.33	-27.53	14,540,351.54	2,046,636.54	40° 1' 48.733 N	109° 32' 56.056 W
9,323.00	2.36	159.81	9,319.78	-61.14	-26.33	14,540,347.75	2,046,637.81	40° 1' 48.695 N	109° 32' 56.040 W
9,416.00	2.04	161.02	9,412.72	-64.51	-25.13	14,540,344.41	2,046,639.07	40° 1' 48.662 N	109° 32' 56.025 W
9,511.00	1.89	152.23	9,507.66	-67.49	-23.85	14,540,341.44	2,046,640.40	40° 1' 48.632 N	109° 32' 56.008 W
9,606.00	2.54	155.02	9,602.59	-70.79	-22.23	14,540,338.17	2,046,642.07	40° 1' 48.600 N	109° 32' 55.987 W
9,702.00	2.45	153.85	9,698.50	-74.56	-20.43	14,540,334.43	2,046,643.93	40° 1' 48.563 N	109° 32' 55.964 W
9,797.00	1.77	152.43	9,793.43	-77.68	-18.85	14,540,331.34	2,046,645.56	40° 1' 48.532 N	109° 32' 55.944 W
9,892.00	1.72	156.32	9,888.39	-80.29	-17.60	14,540,328.75	2,046,646.85	40° 1' 48.506 N	109° 32' 55.928 W
9,987.00	1.52	146.33	9,983.35	-82.64	-16.33	14,540,326.42	2,046,648.16	40° 1' 48.483 N	109° 32' 55.912 W
10,082.00	1.48	135.23	10,078.32	-84.56	-14.77	14,540,324.52	2,046,649.75	40° 1' 48.464 N	109° 32' 55.891 W
10,177.00	2.18	142.04	10,173.27	-86.86	-12.79	14,540,322.26	2,046,651.77	40° 1' 48.441 N	109° 32' 55.866 W
10,273.00	2.39	152.63	10,269.19	-90.07	-10.75	14,540,319.08	2,046,653.86	40° 1' 48.409 N	109° 32' 55.840 W
10,368.00	2.66	156.31	10,364.10	-93.85	-8.95	14,540,315.33	2,046,655.72	40° 1' 48.372 N	109° 32' 55.817 W
10,463.00	2.69	155.42	10,459.00	-97.90	-7.14	14,540,311.31	2,046,657.60	40° 1' 48.332 N	109° 32' 55.793 W
10,559.00	2.50	154.28	10,554.90	-101.83	-5.29	14,540,307.41	2,046,659.51	40° 1' 48.293 N	109° 32' 55.770 W
10,654.00	2.10	158.56	10,649.82	-105.32	-3.76	14,540,303.95	2,046,661.10	40° 1' 48.259 N	109° 32' 55.750 W
10,749.00	2.54	155.62	10,744.74	-108.86	-2.25	14,540,300.44	2,046,662.66	40° 1' 48.224 N	109° 32' 55.731 W
10,844.00	2.41	152.97	10,839.66	-112.55	-0.48	14,540,296.77	2,046,664.50	40° 1' 48.187 N	109° 32' 55.708 W
10,940.00	2.32	155.41	10,935.57	-116.12	1.25	14,540,293.23	2,046,666.28	40° 1' 48.152 N	109° 32' 55.686 W
11,035.00	2.40	147.50	11,030.49	-119.54	3.12	14,540,289.84	2,046,668.21	40° 1' 48.118 N	109° 32' 55.661 W
11,130.00	2.71	153.33	11,125.40	-123.23	5.20	14,540,286.19	2,046,670.34	40° 1' 48.082 N	109° 32' 55.635 W
11,225.00	2.87	150.86	11,220.29	-127.31	7.36	14,540,282.14	2,046,672.58	40° 1' 48.041 N	109° 32' 55.607 W
LAST SDI MWD PRODUCTION SURVEY									
11,290.00	2.87	150.86	11,285.21	-130.15	8.95	14,540,279.32	2,046,674.21	40° 1' 48.013 N	109° 32' 55.587 W
SDI PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,870.00	2,869.65	-21.88	-12.62	FIRST SDI MWD PRODUCTION SURVEY
11,225.00	11,220.29	-127.31	7.36	LAST SDI MWD PRODUCTION SURVEY
11,290.00	11,285.21	-130.15	8.95	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____